

The American Bee Journal

Devoted Exclusively to Bee Culture.

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Editor's Table.

At the Prague Bee and Honey Show, there were 226 exhibits including over 10,000 items.

The Editor received many more invitations to visit prominent apiarists than he could possibly accept, while on his European tour. This he regretted, but as he was under obligations to be home to the National Association, on the 21st instant, his stay could be prolonged no more.

Honey was exhibited at Prague from Palestine, Greece, from the ancient and celebrated Mt. Hymettus, from Hungary, Italy, Russia, as well as Austria and Germany, Denmark, Holland, &c.; but we found none that surpasses the white clover and basswood honey of America. With our varied and unsurpassed amount of bloom, America need not hesitate to exhibit its honey side by side with that of any country on the face of the earth.

We enjoyed an excellent visit at Prague with the Rev. Dr. Dzierzon, Herr Augustus Schmidt, Prof. Sartori, Herr Vogel, Herr Hilbert, Prof. Butlerow, Herr Gatter, and a host of other leading apiarists of Germany and Austria, as well as with that Honorable lady, the widow of the late Baron of Berlepsch, who speaks fluently several languages and is an accomplished, and very agreeable as well as distinguished lady.



Bee-Culture in Continental Europe.

After visiting many of the leading apiarists of England, the editor of the *BEE JOURNAL* took his departure for the Continent of Europe, in accordance with the programme heretofore published.

FRANCE.

From London *via* New Haven, across the English Channel, to Dieppe, an old Norman town, we went on our way to Paris—the most beautiful city of the world. We arrived there in the night, and saw it first by gas-light. It was so magnificently lighted, and seemed so busy even at midnight, that it was no stretch of imagination to think it was but noon. We visited the Pantheon, the Tomb of Napoleon, the Luxembourg, the Louvre, the Arch de Triomphe, the Tuilleries, the churches, the remarkable buildings, the Boulevards, the Champs-Elysees, the Jardin des Plants, the Bois de Boulogne, the ruins of the Palais Royale, and went up in the balloon from the Tuilleries to view the city and see its magnificence. In this country bee-keeping appears to be, as yet, far behind in the matter of scientific management and improved implements—straw skeps and box hives being nearly the only hives in use. *L'Apiculteur*, the Paris bee paper, takes ground quite strongly against movable frames and similar Yankee inventions. When we visited the editor, Mons. Hamet, he exhibited a small queen-cage, similar to those in use in the United States for years past, and thought it the newest thing out, and a very nice thing. It had come to him within a few days from Italy, and as it was the first he had seen, he thought it a very nice and *new* thing! When we informed him that such had been in use in America for many years he appeared almost (if not quite) to doubt our veracity!

We were accompanied to Mons. Hamet, as well as conducted around the magnificent city of Paris, by our friend Mr. Arthur Todd, of Algeria, Africa. He has been carrying on bee-keeping in Africa for some years, but thinks he

will be more successful in Europe, and has determined to move to some location in France or Italy before next spring. Mr. Todd is fully alive to the needs of the times in the way of improved methods of bee-culture, and we wish him success.

We much regret not being able to visit Mons. L'Abbe DuBois, Cure a la Malmaison, near Neufchatel in Aisne, a province of Northern France (Old Normandy). We had fully intended to do so, but our route led us by the way of Dieppe, and we could not get there and fulfill the engagements made in Paris with Mr. Todd—having been detained in Bristol, England, two days by sickness.

ALSACE.

Leaving Paris, we went to Strassburg, in Alsace, an old and justly celebrated city. Near this city is Enghien, the home of Mons. Dennler, one of the editors of the Alsatian bee paper. We enjoyed a day's visit with Mons. Dennler, and interviewed his bees, as well as those of his neighbors. He is a progressive bee-keeper, using all the newest implements of the apiary, and advocating their use in the bee paper which he publishes in company with Mons. Zwilling; the latter we regret not to have seen, but he lives some distance away, and we were obliged to deny ourselves this pleasure. We were to have met Col. Pierson, with whom we enjoyed a pleasant visit in London, but he was detained by sickness from coming to meet us again.

SWITZERLAND.

By the way of Basle, Berne, (the capital city,) and Fribourg (Lausanne), along the coast of the world-renowned Lake Geneva, in sight of those everlasting hills capped with eternal snow and ice, we journeyed to Nyon, the home of Mons. and Madame Bertrand. Their chalet is situated in a lovely place on the shore of Lake Geneva and in sight of the magnificent Mont Blanc. Here we arrived in the evening, and met with a very hearty welcome. The Rev. M. Jacker, a Catholic priest, and

Vice-President of the German-speaking Association of Bee-Keepers of Northern Swisse, who is also the lecturer on bee-keeping for the Association, was here to welcome us, and we enjoyed the visit very much till it was interrupted by a telegram requiring him to leave for home at once on account of the serious illness of his beloved mother. On the morning after our arrival friend Bertrand called us out into his beautiful lawn, where at the top of his flag-staff was flying the American flag in honor of our visit, and there it remained until after our departure. We shall never forget our visit at friend Bertrand's—we arrived very weary with our long journey and were shown every attention by him and his estimable lady, Madame Bertrand.

After a day's rest, in company with the President and Secretary of the Society d'Apiculture Romand, Swisse, we went to the Lausanne and attended the meeting of the Society. The discussions were very interesting, and the display of honey and aparian implements was a credit to this young but energetic Society. We were received with the utmost cordiality. The Secretary's report of this meeting will be found on another page.* We explained American honey resources, implements, and management of the apiary, in several speeches, and the Society passed (with enthusiastic Swiss honors) a vote of thanks to the North American Bee-Keepers' Association for its kind consideration in sending a representative to the Bee Associations of Europe, and particularly to the Society d'Apiculteur Romand, Swisse. By no means is Switzerland behind any other country of Europe in the matter of apiculture.

ITALY.

Our space forbids us speaking of all the interesting incidents of our journey, and of the places we have visited—of the Americanized city of Geneva, sitting like a queen of beauty at the foot of the magnificent lake of the same

name; of Turin, the capital of Piedmont, with palaces, churches, and academies of science and art; of Genoa, one of the chief ports of Italy, with its picturesque scenery, views of the Mediterranean Sea, and Cathedral and Tower of Santa Maria de Cavignano; of Pisa, with its ancient leaning tower and cathedral of 1,000 years' standing; of Rome, with two of the most magnificent churches on earth (St. Peter and the new St. Paul), the Colosseum, the Pantheon, the Forum of Trajan, the Theatre of Marcellus, the Temple of Fortune, the tombs of the ancient Emperors, the Obelisks brought there from Egypt (one said to be 8,000 years old as deciphered from its hieroglyphics), and thousands of other historic monuments, buildings and valuable stones and reliques; of Florence (founded 2,000 years ago), the home of science and learning, and associated with such names as Dante, Galileo, Michael Angelo, Raphael, and others, whose learning and works of arts have received the adoration of a world for scores of ages; of Bologna, noted for its old University, leaning towers and academy of art; of Milan, with its magnificent city and enchanting summer gardens; of Venice, the ancient city of rapturous song, built on 117 islands, connected by 378 bridges for foot passengers, all traffic being done on the streets of water in gondolas (boats of peculiar construction), of which there are over 3,000 ever plying on the water streets. In the midst of the labyrinth of canals and streets there are several large piazzas, nearly all of them adorned with splendid churches or magnificent palaces—the principal one being the Piazza of San Marco, surrounded by elegant buildings and containing the Church of San Marco, a singular but brilliant combination of the Gothic and the Oriental styles of architecture, is said to contain the relics of St. Mark, the stone on which John the Baptist was beheaded, a piece of the Cross of Christ, and a bit of the skull of John the Baptist. Connecting the Palace of St. Mark with

This report, as prepared for the AMERICAN BEE JOURNAL, will be found on page 474.



the Prison is the celebrated covered Bridge of Sighs, where so many went over never to see daylight again. At Venice we witnessed the Royal Regatta, and saw the Queen of Italy award the prizes.

We cannot dwell on such things even of so much interest. Near the city of Rome there is the largest apiary in Italy—the proprietor, Andres Turtuferi, at Romagna Cesena, having 1,200 colonies of bees. Near Bologna, Signor Pietro Pilati has five apiaries and a fine lot of bees. We enjoyed a very pleasant visit with him, as well as from Herrn Lucio Paglia, who also has an apiary at Castel S. Pietro de l'Emilia, a village 15 miles distant.

At Milan we made the acquaintance of Signor Alfonso Visconti de Saliceto, the editor of *L'Apicoltore*, the Italian bee paper, and Count Gaetano Barbo, a descendant from one of the ancient illustrious families of Italy, and President of the Central Society d'Apicoltore d'Italia. The former is descended from the ancient aristocratic family of that name—to his ancestors belong the glory of building the great Milan Cathedral, the largest marble structure in the world—a fine large photograph of which he has presented, in company with Signor Barbo, to the AMERICAN BEE JOURNAL Museum. We dined with these gentlemen on Sept. 1st, and took breakfast with Count Barbo and his mother on the 2d of Sept. These meals were of the true Milanese style, where our friend, the Count, was rather "imaginationous," there is nothing of the kind in the Milanese manner of providing for the human stomach.

At Milan are several good apiaries—Count Barbo, Visconti di Saliceto, Dr. Dubini, and Signor Sartori being among the most extensive—the latter also manufactures and sells all kinds of aparian supplies.

AUSTRIA.

Leaving Italy by the way of Verona, one of the strongest fortified cities of Italy, having also a well-preserved Roman amphitheatre, with seats for 24,

000 persons, we passed through the Tyrol, over the Alps to Munich, Germany, which is one of the pleasantest cities of Central Europe, with fine public buildings and numerous parks adorned with statuary. From thence we went to Vienna, the capital of Austria, a city of modern buildings and parks, as well as fine old historic attractions. Here we met Herrn Karl Gatter, mentioned in our little pamphlet, "Honey as Food and Medicine," a very pleasant and genial gentleman, as well as Mr. Edward Drory, who was for some years connected with the Bordeaux bee paper in France, and who is still much interested in bee-culture.

From Vienna we journeyed to Prague, the capital of Bohemia, which is a commercial city of considerable importance and of many historic events. Here we saw the Crown Prince of Austria, and the Imperial Castle. The Crown Prince's Secretary is much interested in bees, and has several colonies in the Imperial gardens. He is a genial gentleman and a progressive bee-keeper. Here, also, we met Herrn Rudolf Mayerhoeffer, the editor of the Austrian *Bienenvater*, and Secretary of the Austro-German Congress. He is an energetic man, and received us very cordially. Prof. Marsher also lives here, and is an enthusiast on bees and bee-culture. We made many very agreeable acquaintances in Prague, and shall long remember our visit to that city.

THE AUSTRO-GERMAN CONGRESS.

The festive opening of this Congress took place on Sept. 7th at 10 a. m., at Prague, and was honored by the presence of His Excellency, the Hon. Baron Von Weber, Governor of Bohemia, and who formally opened the Exhibition. Among the noted apiarists present were the world-renowned Rev. Dr. Dzierzon; the Hon. Augustus Schmidt, editor of the *Bienen Zeitung*; the Baroness, widow of the late celebrated apiarist, the Baron of Berlepsch; the distinguished Herrn Emil Hilbert; Herr Prof. Dr. Butlerow, of Russia; Prof. Louis Ritter von Sartori, of Milan,

Italy; Otto Schultz, of German comb foundation notoriety; Count Kolovrat, of Prague; Herr Vogel, and many others widely known for their apistical knowledge, inventions or experiments.

The exhibition of living bees was very large, and in every imaginable size and shape of hive—from the clay tube of Palestine to the movable frame hive of America. The bees were well-marked and attractive in appearance, many being Italians, but there were some Hungarian bees exhibited by the Aparian Society of Vienna, and several colonies of Cyprian bees. Many were in observation hives, others in hives of fancy and grotesque shapes, and one colony in a hollow statue of a standing deer, the entrance being in its breast, and the opening for frames in its side.

A peculiarity exhibited by the Rev. Dr. Dzierzon, was a colony of Italian bees with two queens—one being a pure queen and the other a hybrid.

The display of empty bee-hives was very great; one thing may be said in their praise, that the majority of them contained movable frames.

The show of honey and wax extractors was very good; although not up to the American machines in simplicity, still they were effective and calculated to aid in the scientific management of the honey-bee. One honey extractor (the Muth) being the only American machine exhibited.

In smokers the display was *very* large, but they were mostly cumbersome and clumsy machines, nowhere to be compared to the three Bingham bellows smokers exhibited from America.

Honey knives were abundant, but none of them stood well in comparison with the Bingham & Hetherington honey knife, which called forth unlimited praise from such experienced men as Dzierzon, Hilbert, Butlerow, Karl Gatter, &c.

In the line of comb foundation, Otto Schultz has an immense exhibit made from all kinds of wax. It is very nice and creditable.

Much interest was shown in the model

Langstroth hive, comb honey rack, cases of 3 and 8 sections with separators, queen cages, comb foundation, and bees and drones in bottles which we exhibited, as well as Cook's Manual and the other works published at the AMERICAN BEE JOURNAL office.

In the line of honey and wax, the show was very fine. The extracted honey was put up in bottles and jars, the comb honey was mostly in small sections with straight combs, and looked very fine. The wax products were well represented. Wax candles, large medallions of wax representing the several majesties of the countries exhibiting, several pictures in *bas relief*, and wax items in almost every shape imaginable.

The honey wine represented all kinds of flavors, and was in quantity such as would do credit to the counter of a large wine merchant.

The honey cake and confectionery department was as good as it was large, embracing almost all kinds of cake, and many very excellent articles of confectionery. Denmark made a nice display of honey wines, liquors, meads, &c.

In the literary department were all kinds of bee books, journals, &c., as well as lithographic plates of bees, bee enemies, honey-producing plants, &c.

On the grounds you might hear all kinds of languages spoken—French, English, Italian, Russian, Bohemian, Servian, and all the dialects of German—it was truly an International Congress of Bee-Keepers.

HOMEWARD JOURNEY.

Leaving Prague, we visited Dresden, the capital of the Kingdom of Saxony; thence to Berlin, the capital of the German Empire, which is also a very handsome city; and thence to Cologne, the chief city of Rhenish Prussia, which is strongly fortified, and contains many things of general interest; thence to Brussels, the capital of the Kingdom of Belgium, and is situated only 12 miles from the celebrated field of "Waterloo," where Napoleon I. was defeated. Then by the way of Calais, we crossed the English Channel to Dover, and took



the cars for London from whence we will take the steamship Greece on Sept. 19th for New York. We expect to reach home about Oct. 3d, but not until after the *AMERICAN BEE JOURNAL* for October is printed, and hence must leave editorial comment for our next issue.

☞ Prof. Sartori, of Milan, Italy, has lately been to Russia, in the interest of bee-culture, and has met with great success—the Emperor being much interested in the subject. Prof. Dr. Butlerow, Councillor of the Government, was the bearer to Prague, from St. Petersburg, of the Imperial distinction of the Order of Saint Anna, for his friend Dr. Dzierzon. This was presented to him with the usual ceremonies on Tuesday, Sept. 9th, at the Austro-German Congress at Prague. This honor, from such a source, is much appreciated by Dr. Dzierzon.

☞ During the Editor's stay in Europe he has seen two Queens, (England and Italy); two Crown Princes or heirs to the thrones, (England and Austria), and a large number of Royal Princes and Princesses, as well as having made the acquaintance of hundreds of the aristocracy of the several countries he has visited. But he considered it a greater honor and advantage to see her majesty, a queen bee from Jerusalem, in Palestine, and others from Cyprus, Caucassia, Hungary, Greece, &c., with their Royal progeny. Not that he valued the former any less—but that he regarded a sight of the latter more interesting and beneficial.

☞ On the 29th of July last, Rev. A. H. Hart, of Appleton, Wis., departed this life. Mr. Hart was one of the oldest bee-keepers in the West, and was universally respected. A brief sketch of his life will be found on page 453 of this *JOURNAL*.

☞ We have received a line from Mr. Frank Benton, disclaiming the authorship of "Style more Important than Quantity," which was printed on page 405 of the September *JOURNAL*. The article was clipped from an exchange.

The National Convention for 1879.

The annual convention of the North American Bee-Keepers' Society will be held in the Lyceum Theater, (formly Globe) Des Plaines St., Chicago, Ill., commencing at 10 a.m. on Tuesday, Oct. 21st, 1879. Arrangements have been made with the Washington Hotel and Gault House (near to the Theater) for board and lodging of those attending the convention, at \$1.50 per day.

Cheap round-trip tickets can be procured on almost all the railroads centering in Chicago.

The Executive Committee have made arrangements with the Great Western Railway of Canada to carry those coming to the convention, on a return ticket, at one and one-third fare; the Chicago, Pekin & South-eastern Railway at one and one-fifth fare; the Chicago & Lake Huron Railway at 2c. per mile each way; the Chicago & Eastern Illinois Railway, between Chicago and Evansville, Chicago and Lafayette, via Hoopeston and Chicago & Indianapolis, at one and one-fifth fare.

Those intending to avail themselves of these reduced rates must procure from the office of the *BEE JOURNAL*, in Chicago, a printed certificate that they are entitled to such reduced fare, to present to the ticket-office when purchasing their tickets. If enough are coming over the Pennsylvania Central Railway, the Pittsburgh, Fort Wayne & Chicago, and the Cleveland & Pittsburgh Railways to warrant it, we can procure tickets specially printed, for 2c. per mile each way. It will be necessary for those coming over these roads to send their names to the Chairman of the Executive Committee, who will then forward the necessary orders on the local ticket-offices.

All are invited. Present indications point to a very large and enthusiastic meeting.

THOMAS G. NEWMAN,
Chairman Executive Committee.
E. PARMLY, Sec.

The Executive Committee, appointed to make all arrangements for the coming Convention in Chicago, have so far progressed in their labors, as to be able to report the following topics and persons who will lead off in the discussion of them :

"Comparative Length of the Tongues of Different Races of Bees."—Prof. A. J. Cook, Lansing, Mich.

"Patents, as applied to Implements for the Apiary."—A. E. Wenzel, Callicoon, N.Y.

"How shall the mass of bee-keepers secure the largest income?"—Dr. C. C. Miller, Marengo, Ill.

"Wintering bees on summer stands."—J. E. Moore, Byron, N. Y.

"Monstrousities among bees."—S. C. Dodge, Chattanooga, Tenn.

"Dysentery as a bee disease."—E. Rood, Wayne, Mich.

"Fertilization in confinement."—Prof. J. Hasbrouck, Flatbush, Long Island, N. Y.

"Qualities in Bees."—James Heddon, Dowagiac, Mich.

"Foul Brood."—L. C. Whiting, East Saginaw, Mich.

"My Method of Queen-Rearing."—Wm. J. Andrews, Columbia, Tenn.

"A National Apiary and Queen-Rearing Establishment."—Wm. Williamson, Lexington, Ky.

"How to Prevent Swarming."—D. D. Palmer, New Boston, Ill.

"Should we try to Prevail on People to Keep Bees?"—W. M. Kellogg, Oquawka, Ill.

"Introducing Virgin Queens."—Rev. Dr. M. Mahin, Logansport, Ind.

"Can Bee-Culture be made Profitable? If so, how?"—J. H. Nellis, Canajoharie, N. Y.

"Something about Bees."—H. A. Burch, South Haven, Mich.

"Will the Rearing of Dollar Queens be Profitable to the Buyer and Seller?"—D. A. Pike, Smithsburg, Md.

"Comb Foundation."—J. W. Portor, Charlottesville, Va.

"Moving Bees."—N. P. Allen, Smith's Grove, Ky.

"The Next Progressive Step."—Frank Benton, Lansing, Mich.

"Wintering Bees, Theoretically and Practically considered."—H. H. Flick, Lavansville, Pa.

"Miscellaneous Topics."—M. M. Baldwin, St. Charles, Ill.

"Foul Brood; its Dangers and its Cure."—Chas. F. Muth, Cincinnati, O.

"Bee Forage in the South."—Dr. J. P. H. Brown, Augusta, Ga.

"Increasing the Demand for Honey."—Rev. O. Clute, Iowa City, Iowa.

Many of the Essays indicated above are now in the hands of the printers, and it will be gratifying to know all are of a high order, and cannot fail to elicit exhaustive discussions of the subjects treated upon. That this will be the most successful Convention of the kind ever held in this country there cannot be a doubt. Let every bee-keeper come with a determination to bear his or her part in the discussions, and be as willing to impart information as to receive it. Perhaps an old practice with you may be new to some one else. Comparison of practices may suggest theories, and experiments with theories may demonstrate scientific truths. We doubt not all will be well repaid for time expended (not lost) in

attendance, and add to their store of knowledge to leave as an inheritance to their children and friends.

The National Convention.

Present indications point to the National Convention to be held in Chicago, commencing on Tuesday, Oct. 21, 1879, as one of the most interesting and important that have ever been held. Full arrangements have been made, and the President, who has been absent in Europe for the past 4 months, attending the Bee and Honey Shows and Conventions there, is expected home now every day, and in all probability will be at his post before this number of the BEE JOURNAL is in the hands of its many readers. He will make a full report of his observations in Europe to the National Convention, and will make suggestions as to the future honey production and honey markets of the World. He has gathered many interesting facts, and hopes that the bee-keepers of America will reap a substantial benefit as the result of their sending a person to represent them to the bee associations of Europe. He has not been idle, having traveled some twenty thousand miles in search of the information he has gathered; he has visited ten different countries, and conversed with thousands of the principal bee-keepers of the Old World; he has exhibited to them many of our most approved implements for the apiary, and has in return seen their best efforts in the same direction. The subject of honey production and marketing has been fully discussed, and he has the pleasure of knowing that much of the prejudice of the European bee-keepers against American honey has been done away, and also of witnessing the most enthusiastic demonstrations in favor of America and her honey products and modern bee management.

Let there be a general rally at the Chicago Convention. Every bee-keeper in the United States and Canada will find a hearty welcome.



Preparation for Winter.

This is the last opportunity of the season to caution bee-keepers to know the precise condition of their bees. Examine every colony thoroughly and critically. If they are short of winter stores, supply more this month; if you find a colony weak, double it up with the next weakest; if you find a colony queenless, give it a good queen immediately. Get your cellar ready this month for putting your bees in, should a cold snap catch them next month; see that it is dry; put in your ventilators now and prepare the windows for darkening at a moment's notice. If you conclude to winter out-of-doors, do your packing this month—the sooner the better, for rains are coming on, to be succeeded by cold, frosty nights. Leave nothing to chance; but perform your duty promptly, conscientiously, thoroughly. If you have fine stock, you prepare proper food and stabling for them; you are under as great obligations to provide for your bees, which are more helpless.

"Blasted Hopes" in California.

We were favored a few days since with a short visit from Mr. Harbison, who was *en route* to the Eastern States from Southern California. He reports the honey crop in his portion of California as a total failure; so much so, that instead of realizing a surplus from his 3,000 colonies of bees, his cousin, Mr. J. S. Harbison, has been obliged to feed largely to prevent actual starvation. The unfavorable weather of the early spring and the drouth of summer, combining to prevent a nectar secretion in the bloom of the white sage, which has heretofore been their main dependence for a surplus yield. In Northern California bee-keepers have been somewhat more fortunate, but even with them the yield will be far less than an average, and they will have none to spare to throw on the general market.

Exhibits for the Convention.

As there are many who may wish to forward articles of machinery, samples of manufactures, and specimens of production for exhibition in the Convention, we would suggest that they be sent a few days in advance, in order to make a better disposition of them. If forwarded by Express, with charges prepaid, we will look after them to the best of our ability, and endeavor to give all an impartial showing; but we can in no case be responsible for any damage that may occur.

Mr. J. Pometta, whose arrival from Swiss-Italy with a large lot of pure Italian queens was noticed in September number of the BEE JOURNAL, will leave for his native country on the 2d inst. He expresses himself highly impressed with the improvements made in bee-culture in this country, and much gratified with our methods and machinery. He will take with him an American bred Italian queen from the AMERICAN BEE JOURNAL apiary, with a view of still further improving his stock in the old country; also takes with him a foundation machine, Barnes foot-power saw, and various other implements for manufacturing and as samples.

At the Kentucky Agricultural and Mechanical Association Fair, held Aug. 26th, Messrs. Williamson & Bro. were awarded a premium, certificate and diploma on best display of honey; also, special premium in addition to the above for the best display of honey, of a handsome silver medal offered by the Central Kentucky Bee-Keepers' Association; also, premium, certificate and diploma on best display of bee-keepers' supplies. We feel quite confident these honors were well merited, as Messrs. Williamson are among the most progressive of the Kentucky bee-keepers, who are progressing in scientific bee-keeping as rapidly as in any other section of the Union.

Especial attention is directed to the list of Essays on pp. 438-439, this number.

Northwestern Bee-keepers' Union.

At a meeting of the bee-keepers of Minnesota, at St. Paul, on the 4th of September, they organized themselves into the "Northwestern Bee-Keepers' Union," and elected the following officers:

President—S. H. Barreau.
Vice Presidents—Wm. Amery, C. Caspar,
C. S. Pierce.
Secretary—F. B. Dorothy.
Treasurer—Dr. P. Barton.
Board of Managers—J. E. Teter, W. H.
Fletcher, Uriah B. Scott.

The annual meeting is to be held at St. Paul, December 9, 1879, at 2 p.m. There should be a good attendance, and we hope to record an enthusiastic and interesting meeting. Advices from the St. Paul region report the past season as not encouraging in point of honey yield.

A WHOPPER.—We read in the Cincinnati *Grange Bulletin* that "a great 'bee-tree,' three and a half feet in diameter, was felled the other day by R. M. Wilson, in Morgan county, Ky. The hollow trunk contained ten feet of solid honey." Either the story or the "bee-tree" is a whopper. Think of it, "ten feet of solid honey!" Well, well, "did you ever?"

Mr. Thos. H. McWebb, of London, Ont., writes: "I must now say a word for the BEE JOURNAL: I like it splendidly; I have learned more from it, since I became a subscriber, than I knew from 10 years' experience with bees. I wish it every success."

Buckwheat for Bees.

A good deal has been said for and against, as regards buckwheat being a good honey plant, and whether it paid to litter up a farm with the ineradicable stuff, for the sake of breeding a few bees. Recent experiments by prominent and extensive apiarists in this and neighboring states, satisfy us without doubt that buckwheat is valuable as a honey plant. It was found in these experimental beds that the silver hull variety has more flowers on the plants, and yields more to the acre. The honey is dark, but is preferred to all other kinds by some people. It blooms from four to six weeks after sowing.

It will do fairly well on any soil, but thrives best on a rich soil. It should be sown broadcast, three pecks to the acre. It is usually sown here late in July, but for bees it had better be sown early in June,

then it will bloom about the middle of July, when bloom is usually absent, and will, we think, yield just as well; though we judge simply from observing small plants. The cultivation before sowing should be deep and thorough.

It is safe in estimating that each acre of buckwheat sown within $1\frac{1}{2}$ miles of any apiary is worth \$100.—*Minnesota Farmer*.

From the Greenville, Miss., Advertiser.

A Mississippi Apiary.

We have recently visited Mrs. Theobald's park, and inspected Dr. Blanton's apiary of 170 colonies of Italian bees, all handsomely housed beneath the grand forest trees in Langstroth hives. Our clever friend has given much time and thought to bee-culture, and has practically proven that an apiary in our section on a large scale is not the visionary dream of a sensationalist. We cannot now tell of all the interesting and mysterious sights, but can assure all who are at all curious that they will be amply repaid by an evening visit to the apiary. The park now, with its magnificent trees and inviting shade, is more lovely than ever, while the numerous hives of snowy whiteness suggest the idea of so many cottages in a miniature city. The workshop and store-room of the establishment are models of neatness and convenience. Here we examined the honey and wax extractors; near by was a circular foot-power saw for making hives; then there was the bellows smoker for quieting the little workers. On looking around we noticed the artificial comb that assists and guides the bee in making perfect combs. The shipping cases are constructed with glass sides, to expose to view the beautiful comb honey. Our genial host informed us that the present season had so far been a poor one for making honey, owing to late frosts in April and a "cold snap" in May. The harvest to date has been about 1,500 lbs. of comb and 1,200 lbs. of extracted honey. The Doctor uses the movable-frame hive, with glass section boxes in the upper story, so that he can manipulate the comb and bees with as much ease as the gambler does a deck of squeezers. We were also informed that, excepting California, there is no country better adapted to bee-culture than the alluvial lands of the Yazoo delta. The Doctor is thoroughly versed in Bee-ology, and takes pride and pleasure in furnishing valuable information to all citizens interested. Thus ended a pleasant visit, and we'll be sure to go again.

THE HIVE I USE.—This is a pamphlet of 16 pages, giving a description of the hive used by Mr. G. M. Doolittle; it is re-published from the BEE JOURNAL for March, for the convenience of the many who desire to get the particulars therein given, either for reference or making the hive for their own use. It can be obtained at this office: price 5 cents.



Correspondence.

For the American Bee Journal.
Northern Michigan for Bee-Keeping.

JAMES HEDDON.

After spending nearly four weeks in the northern portion of this peninsula, hunting, fishing, and looking at land and flowers, I am almost as much as ever at a loss to determine whether it is a good location for bee-keepers. I am rather of the opinion that I prefer the southern portion of the State for bee-keeping as a specialty. I think there is no doubt of the existence of a surplus honey crop in this high latitude. There, perhaps, it would better pay the farmers to "keep a few bees" than almost anywhere else, because his time is of less value than the cultivator of hundreds of acres of more costly and tillable land.

In selecting a location for bee-keeping as well as for farming, in the northern country, great care should be taken, as many sections would have but one or two surplus-honey yielding plants. I find that the "bee disease," is there too. The advantages of the locality seem to be the great amount of wild red raspberries, and the cool nights which the basswood bloom always enjoy. What seems to be missing at present are white clover, fruit trees and whitewood, and, so far as I can learn, a fall harvest generally. I found the boneset and solidagos there in small quantities, but I presume these plants are not adapted to either the soil or climate of the northern region. I also found several kinds of autumn flowers that are indigenous to the locality, growing in sufficient quantities to produce a surplus honey crop, but as to their honey-yielding quantities I cannot decide, as there are no bees in the country where I inspected them. One of these plants, much resembles the Sweet-William in shape of flowers, and is probably the great willow-herb (*epilobium*), is very abundant, and if a honey-yielding blossom, would be of much value to the northern apiarist. From its "style" I have some fears of its being a honey producer.

I entertain some doubt about the climate being suitable for a fall crop, so high up as the locality named, which embraces the counties of Charlevoix and Emmet. The weather I learn is usually cool and subject to rains, which is much like the fall we are having here (Dowagiac), and our fall honey yield is

a total failure, the first time in eleven years. How the long confinement of winter would affect the health of the bees in the northern latitude I cannot tell; but if the honey was all right, I guess they would winter well.

In regard to the healthfulness of that far-famed region of "Petoskey," so far as I can learn from experience and inquiry, it is quite a sanitarium for hay-fever, some cases of asthma, and malarial troubles. It also stimulates the digestive organs for a time, the same as our locality does for those who come from the east, which is no doubt caused by the change of climate.

Our bees are gathering just enough honey to keep up breeding and keep the hives heavy. This they get from golden rods and the asters, of which we have an abundance, and were the weather not so cold, we would get a nice surplus. Nearly all around us frosts have damaged the crops and flowers, but here it has done no harm, as we are protected by Lake Michigan, whose 900 feet depth of water heaves up its warmth when the sun has bid us good-evening.

Before closing I wish to diverge and say a few words about Niagara's little rival,

"PETOSKEY."

This is a new town of about 1,200 souls whose main object in life seems to be to extort exorbitant prices from all who chance to be so unfortunate as to come within their grasp—with some noble exceptions, of course. This spirit seems to be both contagious and epidemic here, and attacks persons of both sexes and all ages, from the boy who sells pebbles from the beach at 25c. each, to the land agent who wants \$25.00 before he can commence to talk trade to you. All this naturally drives away the lover of honesty and justice, though he be a millionaire. While there I enjoyed the great privilege, "without money and without price," of standing in the trail where for hundreds of years the noble red man lightly capered from Mackinac to Grand Traverse, and 200 years ago Father Marquette accompanied them along this trail. Across the bay I admired the old Indian Catholic church, of seventy-five years' existence. It was the base, not a model, of architecture. Nor have I much reverence for the old fables repeated over in Latin to the ears of red nobles for the last three-quarters of a century. But, then, it was old; had been there a long time, you know.

Then I visited the old chief, or coun-cilor, Petoskey, after whom the town was named. This old Indian cannot

speak any English; believes he is 91 years old, though he looks to be about 50; has curly hair; looks like half Caucasian, and is a gentleman in looks and bearing. His intelligence is in my mind most extraordinary, as he utterly refused to join the Jesuits, and the stealing of his wife for 20 years could not induce him to yield up his individuality and manhood. I shall never forget either Petoskey.

Dowagiac, Mich., Sept. 15, 1879.

For the American Bee Journal.

Experiments with Eggs and Larvæ.

H. L. JEFFREY.

I gladly comply with your request to report my experiments with eggs and larvæ, and will give the detail of a few, and results gained up to this time. As I have previously stated through the *Exchange*, my attention was turned to experiments by accidents which happened in May and June. About the middle of May I discovered that full-grown drone larvæ would cap over and gnaw out in a moderately warm room, and that some eggs which had been laid in sections of drone comb, and had been out of the hive from Monday till Saturday night were found hatched the Monday following, and had not been in the hive 40 hours, an impossibility with a new-laid egg; and they will not hatch in less than 60 hours, and are usually 72 to 80, according to the weather. The section-box incident happened in the apiary of Mr. C. A. Stone, in June, and I saw the boxes in each change that was made with them. This gave me the first link in the chain of experiments with eggs. The first one I wrote to was J. H. Nellis, June 30; he shipped me some brood July 2, taken from the hive at 12 m., arriving at 3 p.m. July 4; one-half was put in at 6:30 p.m.; $\frac{1}{4}$ at 8 a.m. the 5th, and the rest at 7:30; the piece was $4\frac{1}{2} \times 2$ inches, cut into 4 pieces. The 2 pieces put in the 4th—they started 7 cells, on the other 3 cells. On the one put in the morning of the 5th they started 2 cells; on the one put in the evening of the 5th they started 5 and deserted 2. The 10 cells started on the pieces put in on the 4th were torn down by the bees, but the 5 that were capped on the 2 pieces that were put in the 5th hatched; 2 were lost and 3 were mated. They were so near alike that without minute examination they could not be told apart. Three other times I sent to Mr. Nellis for brood. The second one was taken out at 9 a.m., July 23d, and received the 25th at 3:30 p.m., but being considerably bruised was not accepted by the bees. The third was taken from the hive Aug. 5th, at 2 p.m., and was received at 7:30 p.m., Aug. 7. It was put into a nucleus at 9 a.m., the 8th, and taken out the 9th for 36 hours; then put into another nucleus. One-fourth of the brood came out perfect bees. The fourth piece from Mr. Nellis was sent August 15, and received the 16th. A few cells were built, but the queens

became barren on account of rainy weather when old enough to mate.

I sent to A. L. Root 3 times for brood. The first was sent the 6th, received the 8th. The nucleus was not very strong, and was robbed; then the brood was shifted, but was pulled out by the bees. The second time he sent me 2 pieces, 2×3 inches, Aug. 14; received at 3:30 p.m., Aug. 16. They were both pressed into a box made for only one, and were useless. The third sent by Mr. Root was taken from the hives at 2:30 and 2:35 p.m., Aug. 19; received at 3:30 p.m. the 22d. Both were larvæ, and were given to the bees at 6:30 p.m., but were allowed to starve after being in the hive over 48 hours, and I could discover no cause for deserting it. I never knew bees to do so, either previously or since.

The first piece sent from the AMERICAN BEE JOURNAL apiary, from an imported queen, Aug. 26, by express, received the 29th, remained in the hive unchanged till Sept. 2, and since then one egg has hatched into drone larva. The second piece you sent Sept. 10, arrived 13th, but I was away, so it was not given to the bees till the 15th; but the eggs were all pulled out on account of having perished from exposure to a dry cool atmosphere for about 36 hours, the first that have perished from that amount of exposure.

There are many more experiments, but I will not give them all in detail, only giving in full the different modes of inserting the brood. The first trouble is to give it the same scent as the hive into which it is inserted. Second, the bees will pull out both larvæ and eggs after the comb has become very cool or exposed to smoke of any kind, or if it has any animal or other foreign smell. Third, after the larvæ have consumed the fluid so as to become dry, it will be pulled out; and fourth, a heavy flow of honey will excite them to pull it out every time within 12 hours of insertion.

To insure the bees accepting brood, first give it the scent of the hive. If eggs from a choice queen are used, put a piece of wire cloth over the comb till they begin to hatch, or in any other way give it the warmth and scent of the hive, and if the larvæ has become dry moisten carefully with tepid water and honey, and when warmed let the bees have free access to it with perfect safety, and if the bees to which it is given are not more than 4 days hatched, they are better in a good flow of honey; but if honey is scarce, at least two-thirds should be over 12 days old, with hatching brood to come on as fast as the old ones die off.

Pure Italians take either eggs or larvæ better than the blacks; but hybrids are not usable in cases where brood has once become cold, though they will start the most cells and rear the strongest queens every time; but they will tear out eggs or larvæ as fast as you can give them either.

The oldest piece of eggs that a cell was started from has been about 5 days and 2 hours as near as time agrees, and the longer the eggs are out of the hive, the longer the bees are capped, queen-cells extending to the 11th day, and workers to the 24th day. Seven days keeping worker-eggs, has resulted in $\frac{1}{4}$ drones.



Queens reared from eggs or larvae kept from the bees for any length of time, not only makes them remain in the capped cell, but makes them longer about mating and laying, and though they are rather slow layers, they keep steadily at their business, and close watching seems to make no perceptible difference with them; and I cannot see that they are in any way less valuable than other queens. Drones act considerably more sluggish when reared from larvae or eggs kept long from the hive. From 24 to 72 hours keeping of eggs seems to make no perceptible difference; but when more than 72 hours out of the hive, they are longer hatching.

Capped worker brood has gnawed out at 58°, but were very weak and soon died. Drones emerging at the same temperature, when put into a nucleus, appeared as lively as any others, and seemed to live as long.

Queens emerging at a lower temperature than 65° to 75° never mated, and often died within 36 hours after gnawing out.

Queens that were hatched away from the bees and kept away from them, except 3 or 4 put in the cage to feed them, and kept in a dark warm place till 4 or 5 days old, and then put on a frame of hatching brood, were invariably mated the second or third day after, if it was at all, clean through the last of June, July and August, and a less proportion will be lost, than if reared in the ordinary way in a nucleus.

Woodbury, Conn., Sept. 20, 1879.

For the American Bee Journal.

Uniting and Introducing.

C. W. TAYLOR.

As the season for uniting bees is now at hand, it may not be amiss to suggest to some of the younger contributors of the JOURNAL, that if they will use a spare hive to put their united colonies in, they will find the operation to be much simplified. It places the bees all on the same footing, and I have found them much more inclined to be peaceable. If there is anything that will rouse the ire of a bee, it is, having his domicile invaded, or intruded upon, by his neighbor. I give the bees a good smoking, and allow them to fill themselves, and I keep each set of frames on its own side of the new hive, and allow the bees to mingle at their leisure. Should entrance blocks have been used, I take one block belonging to each of the old hives and place it on the side of the new hive to which it corresponds, and clear away all the rest of the old material out of sight and scent of new colony. If the operation has been carefully conducted, there will scarcely be a bee killed.

It is curious that the use of the Lycoperdon, or Puff-Ball which was so much in vogue some 20 years or more ago, both for uniting bees and introduc-

ing queens, has been so entirely discontinued. This disuse has arisen from the fear of foul-brood. That it could be so used as to cause foul-brood I have no doubt; but it is equally evident that there can be no foul-brood in a hive when there is no brood in a condition to be fouled and it is only in such a case that I would advise any one to experiment with it. Mr. Langstroth was the first person who called my attention to it, many years ago, and I used it quite freely for a time, and I believe I never failed in introducing a queen with it. When I used it I labored under difficulties, and I had no Bingham smoker by which the dose can be adjusted to a nicety. I had to take out half the frames from the hive to adjust an apparatus in one corner to hold a live coal or two, or a piece of rotten-wood, which I covered with wire to keep the bees from getting into it. Now there is nothing of the kind needed. All that is necessary is to see that the hive contains no queen and no young unsealed brood. Then I smoke thoroughly until the bees begin to drop from the frames. As soon as they have fallen to the bottom of the hive, I dip the queen to be introduced in honey, and place her between the frames in the center of the hive. This is for the sake of any bees that may have been outside during the smoking, but the odor is so powerful and so penetrating that she will soon acquire the scent. It should be borne in mind, that there is nothing poisonous about the Lycoperdon. It is powerfully intoxicating, and in its effects can be placed somewhere between alcohol and opium, it is not exactly either, but resembles both. I know that for a little while after the operation the bees are about as cross as an old toper is after he has been indulging in a spree, and woe to the robber bee that alights near them, as they are coming out of the hive after their smoke. There are whole nations in Asia who make use of the Lycoperdon for its intoxicating effects. They smoke it in their pipes mixed with tobacco, and also manufacture a drink from it. It is also claimed for it, that when taken at a proper age and sliced and fried in butter that it makes a dish superior to mushrooms. I think that at this season of the year, after the queen has done laying and when robber bees are plenty and always on the lookout, it will be found to be very valuable, as it can be used from now until mid-winter. I never was so simple as to use the article in warm weather when the hive was crowded with young brood, and I do not suppose that any one who



deserves the name of bee-keeper will do so either; but keep it in its place, and like alcohol and opium, it will be found that it was not made in vain.

I made an addition to my apiary last spring and find that I have now on hand some 25 or 30 queens that are neither superannuated or impure and will have to be replaced, and I intend to use the Lycoperdon as long as my supply holds out as I find it fills my bill exactly.

Oakford, Pa., Sept. 17, 1879.

For the American Bee Journal.

Apiarian, or Apiarist?

N. CAMERON.

We are accused in the last JOURNAL, of "riding a little hobby" on account of using a good adjective for a noun. This is nothing uncommon; there is hardly a page in the dictionary but one or more nouns and adjectives may be found with the same orthography. We are told that the difference of opinion was settled in vol. 13, p. 165, A. B. J. If the opinion of one man can settle a question of this character, then it is settled. But, alas! our best laid schemes "gang aft aglee." The old readers of the JOURNAL will remember that this same question was settled by the JOURNAL, vol. 7, p. 111, the other way. Now, who can tell but the JOURNAL may again turn about on this question. While we accord to everybody the right to use "apiarian" only as an adjective, we at the same time claim the right, with many other "distinguished apiarians," to use it as a noun. Many, if not a majority of the leading writers on apiculture, both in this country and in Europe, use this word as a noun. It is a change that meets with favor from progressive men and we are for progress in the science of words as well as apiculture. All we asked was fairness. We doubt if there is another bee paper published in the world, that will not allow its correspondents to use in its columns "apiarian" as a noun. The JOURNAL, by substituting "apiarist" for its correspondents whenever they use "apiarian" as a noun, and allowing others to use "apiarist" as an adjective is evidence to my mind that the JOURNAL is somewhat prejudiced on this word, and is the one that is riding the hobby instead of myself; and a miserable, old, spring-halt and sprained hobby of the Kirby age it is, without any pedigree, or, as the boy said, "of doubtful antecedents," and so exceedingly jealous of the little hobby that we ride, that we

are excluded from competition in the race for popular favor. The smooth, well-built and improved horse is put out of sight, while the ungainly, raw-boned beast of a primeval age is exhibited, labelled, "This or nothing!" Lexicographers do not coin words, neither is the word "apiarist" derived from the Latin word *apriary*. Then, wherein lies its particular claim to our favor? Ugly from every point of view, and without legitimate parentage, we cannot see that we are under any particular obligations to make a pet of it. Therefore, Mr. Editor, allow us to say that great "apiarians" will differ, and we see no reason why all honest differences should not be mutually respected.

Lawrence, Kansas, Aug. 18, 1879.

[In nearly every printing office in the country where MMS. constitute the majority of copy given out to the compositor, it has been found necessary to adopt a standard authority for his guidance, not only in the spelling of words, but in the substitution frequently of grammatical language for that which he finds written; and in the matter of punctuation, manuscripts are seldom found correct. The JOURNAL is no exception to the above-mentioned custom. Our compositors would as soon give Mr. Cameron's "alass," for alas; or "primevil," for primeval; or "anteceedents," for antecedents; or his "prejudice," where prejudiced was evidently intended, etc. We claim the same right to substitute common (not universal) usage in the application of the noun "apiarist," that we do in the application of recognized usage in punctuation, and more especially are we justified in doing so, when supported by the only authorities which we can find committed upon the subject, viz : Kirby, Webster, Worcester and Zell. Nor does his "horse" tirade detract anything from the respectability of the authorities cited. That our honored predecessor, in vol. vii., p. 111, was of opinion that the adjective should be used as a noun, does not make it binding upon the present editor, or any of his successors, to adhere to an error when convinced of its existence. Kirby, Webster, Worcester and Zell may be



wrong, but until so proven, mere individual opinion will not change custom. Though the word may not be of "legitimate parentage," who can gainsay the respectability of its sponsors?—ED.]

For the American Bee Journal
Apiarian, or Apiarist?

W. O. CARPENTER.

I am inclined to think friend Cameron is correct in his mode of pronunciation apiarian. The word is derived from the Latin *apiarius* (the a being long) "one who attends to the culture of bees." *Apiarium* being a bee hive. I think apiarist destroys the euphony of the word, which after all is our best guide for all such words where there is no settled rule or authority; it seems to chime in with such words as grammarian, sectarian, vegetarian, valetudinarian, apiarian, &c. You carry your word as far as grammari—sectari—valetudinari—apiari—before you affix your final monosyllable, which plainly by the rules of euphony indicates an; *apiari-an* not *apiari-ist*, much less taking a still greater liberty by curtailing the final i and calling it *apiar-ist*. words which terminate in y like geology, mineralogy, botany, toxicology, &c., evidently indicates changing the y into ist as geology, geologist, &c., but it appears to me to be contrary to the laws of euphony to say grammarist, apiarist, as it would be to distort geologist into geologian or mineralogian, &c. There are some few other words such as microscopist, scientist, dentist, herbalist, &c., where we can only be guided by the natural laws of euphony in their pronunciation.

Such a word as apiculturist would satisfy all parties. I have searched three or four English dictionaries (it may be in Webster) but I cannot find either apiarian, apiarist or apiculturist in any of them, it is a new word manufactured to suit the times.

[Euphony, we fear, would be subject to many constructions, if adopted as a rule to arbitrarily settle disputed points in language. There are exceptions to many general rules, and some to the examples given above—i. e., "sectarist," from sectarian; "geologian," from geology, though Webster pronounces both rare. But who has cast a doubt upon the correctness of both theologian and theologian? Again, we have floricultural,

floriculturist, floral and florist; and the law of euphony that allows the use of apiculturist will justify that of apiarist. All the authorities that give the words at all, give the preference to "apiarist" as the noun. See Webster, Worcester, Zell, etc.—ED.]

For the American Bee Journal.

"Linn."

JOHN ALLEN.

In the BEE JOURNAL for August, p. 373, Mr. G. M. Porter asks what authority there is for the use of the word "linn" instead of "linden," and says, further, that he cannot find "linn" in any dictionary, botany or bee manual that he has seen.

I have seen the word "linn" in the different bee-periodicals, and have heard it used by people in the West as the common name for the linden or basswood. Indeed, we have here in Iowa a "Linn" county. In looking over Gray's "Manual of Botany," at the close of what he had to say about the genus *Tilia*, which includes the American and European linden, I found this note: "This tree (the *Lin*) gave the family name to Linnaeus." On looking at the article Linnaeus, in the eighth edition of the "Encyclopaedia Britannica," I found the same statement in somewhat fuller form.

In Arthur Bryant's "Forest Trees for Shelter, Ornament, and Profit," page 151, he says: "*Tilia Americana*—Lynn, Linden, Basswood." This book is published by Henry T. Williams, of New York. Halliwell's "Dictionary of Archaic and Provincial Words," gives "linn-tree, a lime-tree." Indeed, I find that in America the linn is not unfrequently called the lime.

In the fifth volume of "English and Scottish Ballads," edited by Prof. Childs, and published by Little & Brown, Boston, the glossary gives "lynde, lyne," and for the meaning, linden, lime, tree in general.

Since finding this word in the glossary to the ballads, there have come into my mind faint memories of not unfrequently meeting the word "linne, lynn, lyne," in my reading among those old ballads, unique and beautiful, that have drifted down to us from the days of "auld lang syne," but I cannot to-day refer definitely to any verse in which the word is used.

Mr. Porter appreciates "The Blessed Bees" so kindly, that I regret to have him think the use of the word "linn" a



blemish. I think he will see from the above that it was not used without good authority. To my ear the words "Linn" and "Linnswick" have a more antique and poetic sound than "Linden" and "Lindenwick."

Iowa City, Iowa, Sept. 22, 1879.

For the American Bee Journal.
Honey in England.

H. K. & F. B. THURBER & CO.

Now that the honey harvests are about closing and the minds of producers naturally enough turn to the problem of how and where it will be best to sell their crops, we thought a few lines from us would be of seasonable interest to them particularly if we touch upon the question of a foreign outlet.

As every one now pretty generally understands, the season in the United Kingdom has been singularly disastrous for all kinds of crops, and so entirely fatal has the cold wet rains been to the honey yield, that not enough honey could be collected to make a respectable showing at any of the fairs this fall. In France the honey crop is also short, but in the southern part of the Continent as also in the West Indies and South America, from whence large shipments are made to this country, an average yield is calculated upon. Prior to our general introduction of American honey upon this side, the London, Antwerp, Liverpool and Hamburg markets were supplied from Chili, Jamaica and Peru, while connoisseurs in England were supplied from Narbonne, in France. Last year, however, the overflowing crop of America found its way direct from San Francisco and New York to the English and German ports in such quantities that the West India and South American honey has not met with its usual ready sale. When we first saw as much as 2,500 barrels of Chilean honey advertised for sale in Liverpool, we were surprised, and sought out the parcel with a view of obtaining all the information we could upon the manner of its sale. In Liverpool, as in all other European ports, the docks are regarded as their greatest and most necessary public improvements, and to defray the expense of keeping them in order every parcel of goods unloaded is taxed for "dock and town dues" a certain sum per ton. Along the sides of these docks are immense warehouses into which the vessels discharge their cargoes. There the honey is submitted to another tax; they charge for instance a six-pence (12

cents) per barrel for receiving honey, and a six-pence for delivering each barrel into the cart or wagon of the buyer, and one-pence (2 cents) per barrel a week for all the time it remains unsold. When we reached the dock where the 2,500 barrels were being discharged, we found an old man drawing a little sample from each of the barrels, after examining which he would mark the barrel it was drawn from either "X," which denoted white color, fine flavor and heavy body, like basswood or white sage; "1" which designated a colored honey about like white clover (we would hardly have discriminated between these two grades, but he did); "2" indicated a grade the quality of which was about like golden rod, "3" was like our buckwheat, and "4" resembles in color and body Louisiana honey. Each of these marks were piled up separately and those assorted samples were sent to the broker or auctioneer, who advertised and sold them in one of the commercial salesrooms in Liverpool with the following result:

Pile	x	40s.	lb.	112 lbs ; about	8½c. lb.
"	1	38s.	"	"	8c. "
"	2	35s.	"	"	7½. "
"	3	30s.	"	"	6½. "
"	4	26s.	"	"	5½. "

We have since found this system prevalent in all the European markets, and the prices named have averaged just about the same for the last ten months. The market is rather bare and we anticipate higher prices this fall. The cost of freight for honey in barrels and square 5 gallon tins from New York to London, including dock and landing charges, equals about half a cent per pound; that is, about one cent per pound less than the freight is from Cherry Valley to New York City. Freight direct from San Francisco to London is $1\frac{1}{2}$ to $1\frac{3}{4}$ cents less per pound than from San Francisco to New York; while the cost per pound from New Orleans to London is 50 per cent. cheaper than from New Orleans to New York or Chicago. Eight and a half cents per pound in London will net the California honey producer more than $10\frac{1}{2}$ c. per pound in New York would.

Extracted honey is liked much better than strained, because it is free from dead bees and filth, and this preference makes American honey better liked. While candied honey is sold in pots and jars, the packers prefer it liquid when they buy it, because they can pour it into the pots and jars and let it congeal there. They never remelt candied honey, because, as they truthfully say, after candied honey has been heated



fermentation is more likely to occur. The freight and expense of transporting comb honey from New York to our store in London is about $1\frac{1}{2}$ to 2 cents per pound. According to the "weights and measure act" of this country, we are obliged either to specify exactly the net weight of honey each box contains, or sell them by the dozen boxes; and as "a box of honey" is a box of honey to most buyers on this side, a 30-pound crate brings no more than a 25-pound one. So we urge for this market a uniform size box be used.

The lowest price at which we have sold sound light honey on this side at has been 24 shillings, less 25 per cent., which is about 16 cents per pound gross weight. The highest, 27 shillings less 10 per cent. Buckwheat honey in the comb is not in request at any price. The expense attending the sale and distribution of comb honey after its arrival on this side, will always be an impediment in its way; still there will no doubt be a trade in fancy marks at remunerative prices.

Since we embarked in the honey business, we have had many interesting conversations with the most intellectual honey producers in America regarding the comparative cost of producing box or extracted honey. The information thus gleaned, when considered in the light of our observations here in Europe, and the difficulties attending the safe distribution of honey in the comb, prompts us to warmly recommend the great masses of honey producers to work their apiaries for the exclusive production of extracted honey. If the honey industry in America continues to increase at the same ratio it has the past 10 or 15 years, it will be indispensably necessary to seek a market here in London, the great barn for all the earth's harvests. We earnestly hope, for the sake of the best interests of the bee-keeping community, you will take time by the forelock and work up a greater interest in the production of extracted honey. Extracted white sage honey and basswood honey will always bring fancy prices, on this market.

We will always be most happy to reply to any inquiries your readers may wish to make regarding the European markets.

London, England, Sept. 7, 1879.

Bee Profits.

A hive of bees can, with ordinary management, be doubled every year for several years. Let us figure a little and see what the result will be, say for seven years. In

the fall of the seventh year we have 64 colonies; 20 pounds of honey to the hive every year will be a low average for that length of time; 15 cents per pound is not high for honey; we have 2,540 pounds for seven years; that at 15 cents, makes \$381, if I have made no mistake. The 64 colonies, at the low rate of \$7 per colony, makes \$548; this added to the value of the honey gives the snug sum of \$929. This is no big thing but it is enough to pay for all the trouble it costs. Some will say it looks well enough on paper, but not one man in fifty can do that well. I believe it can be done every time with proper care. I would like to hear from some of our bee keepers on the subject. If they think that I am extravagant in the figures given above, let them say so.—*Cor. Indiana Farmer.*

For the American Bee Journal.

Notes from Georgia.

A. F. MOON.

After a long drouth, about the 20th of July rain began to fall, which caused the flowers to come forth in endless profusion, emitting their usual fragrance. The little bees, which for some time had been compelled to suspend work on account of there being no honey to be found, were all awake, and every bee seemed eager to see who would get the most of it. This resulted in rearing much brood at an unusual season of the year, producing, as it did, heavy swarms coming off the 1st of September, and we have had several fine swarms since. With the aid of a few frames of brood and honey, we have made good colonies of them. Some colonies have gathered more surplus since the 1st of August than before. Bees are, as a general thing, in fine condition for wintering, and are still gathering some.

I have a colony at work that has about completed a piece of honey one cubic foot. O! how I wish I could had it ready for you to present to our friends across the water; but, then, it would have been so heavy for an editor to be carrying along. This little casket, when completed, will weigh over 100 lbs. Well, we can cause bees to make it 2 feet, on the same plan. But I must stop, Mr. Editor, fearing there will be many "doubting Thomases" now. There is nothing strange, when we understand how it is done, and have a disposition to do so.

Success to the National Bee-Keepers' Convention! Long may it live; I shall never forget that I penned the first line to call it into existence.

Rome, Ga., Sept. 15, 1879.



For the American Bee Journal.
Duplicating Queens.

J. ANDERSON.

In the last BEE JOURNAL, I have just read Mr. A. F. Moon's challenge to bee-keepers regarding a queen that duplicates herself. It is not my purpose to send you—particularly at this late season of the year—a queen such as he wants; but, in case that his very strong statements should lead any of the readers of your most excellent JOURNAL to conclude that there are no queens in existence that invariably duplicate themselves, permit me to state that I have such a queen now in my possession. By this I mean that I have a queen, the mother of a large number of queens, now in my apiary which invariably duplicates herself. I cannot now state the number of queens I have from her, but this I say, that I reared last summer far more from her than Mr. Moon wants in order to establish the existence of such a queen; and that I have not yet met one dark queen from her—not one of all I reared from her. All are as bright as herself, and she is a highly colored queen. Some of her daughters are a little brighter than the mother; but will probably be like her when as old as she is. Perhaps Mr. Moon may regard this as a confirmation of his theory. Well, of course, if the daughter is a little brighter than the mother, then they are not alike; true, but if Mr. Moon takes this ground, then all I have to say is, that the discussion is regarding dark queens produced by bright and pure mothers. Generally no fault is found with queens for being too bright. I have no motive in making the above statement, but simply to guard some of your readers against an impression which I am confident is not correct; indeed, I am as satisfied of its incorrectness, as Mr. Moon can be of the opposite. I have only one queen just now of which I can speak so positive. There may be others in my apiary of which the same might be said were they tested. The queen alluded to is not an imported one. I received an imported queen this season, but her queen-daughters vary greatly in color—some of them very bright, and others very dark—so dark that but few would regard them as pure. Why should any one conclude that pure queens should not duplicate themselves? Black ones do it. Fowls also, particularly wild fowls, duplicate themselves.

But, Mr. Editor, I flatter myself with the thought that I have established one thing connected with the rearing of

queens, namely: that the heat of the hive and of the season has to do with color of queens, for you cannot raise as bright queens in the spring and fall as in mid-summer; nor will a queen reared in a weak colony be at all equal to one reared in a strong colony.

Tiverton, Ont., Sept. 3, 1879.

For the American Bee Journal.
Doolittle's Honey Report.

G. M. DOOLITTLE.

We hope that the numerous readers of the AMERICAN BEE JOURNAL have not expected a large report from us this season, for if they have they will be mistaken. In no calling in life is a continuous success expected of great proportions, but if as a whole, we can keep gaining steadily, we should be satisfied, or, at least, we ought to be.

We shared the fate of many others last winter and spring in losing quite a number of colonies of bees, and many more were so weak as to compel us to unite them to give us any chance of success. This, with the sale of a few colonies which we promised during the winter, left us with only 60 to commence the season with. The season was rather backward and bees did not obtain plenty of pollen till about the first of May, while gathering honey was out of the question till nearly June first, at which time apple blossoms opened. Bees obtained plenty from this source to carry them over the period of scarcity which we always have between apple and white clover bloom.

White clover opened June 15th, and only yielded honey enough to keep the bees rearing brood nicely while in blossom. Basswood opened about July 12th, and yielded a steady flow of honey, although the yield at no time was great, till August first. Buckwheat gave but little or no honey, so the bees hardly obtained a living from that source. So, taking it altogether, the season has been unfavorable for surplus honey. We have, however, obtained 2,909 lbs. of box honey and 572 lbs. of extracted, making 3,481 lbs. in all, or 58 lbs. per colony as an average yield. This is the lightest yield we have had during 7 years, with the exception of 1876, when our yield per colony was but 50 lbs. We shall go into winter quarters with 100 colonies.

Perhaps it may be interesting to the readers of the A. B. J., to know how our report stands for the past 7 years, for it is only by a number of years'



experience in any business that a true result as regards profit or loss can be obtained. Our average yield for each colony in the spring of 1873, was 80 lbs.; in 1874, a fraction of a pound less than 100; in 1875, a little over 106; in 1876, just 50; in 1877, a little less than 167; in 1878, 71; and in 1879, the present season, 58 lbs., making an average yield of a little over 90 lbs. per colony for the term of 7 years. By looking over our diary we ascertain that our honey has sold at an average price of $21\frac{1}{4}$ cents per pound, the highest price being obtained ($28\frac{1}{2}$ c.) in 1874, and the lowest ($10\frac{1}{2}$ c.) in 1878.

From past experience, we believe a thorough, practical, workingman can do all the work required to be done with 100 colonies of bees, and from the above he should obtain for an average term of years, 9,000 lbs. of honey annually, which at $21\frac{1}{4}$ c. per lb. would bring him a yearly income of \$1,912.50. Although the average yield per colony for 7 years to come may be increased, yet the price during that time is likely to be lower, as the high prices caused by the war are passed, and unless we have some unforeseen event to raise the price of honey, it will probably never bring 28c. per pound again. Still, with a much lower price for honey than that averaged for the last 7 years, bee-keeping ranks favorably with almost any other pursuit.

Borodino, N. Y., September, 1879.

For the American Bee Journal.

Experiments with Foul Brood, Etc.

E. P. ABBE.

I send you to-day a bee destroyer Asilus, I suppose, that I caught in the act. I presume it is the same species that you have spoken of as a common pest in Missouri, and I send it only as a specimen from a widely separated locality.

A few years ago my apiary was seized with foul brood, nearly every hive (I had at that time about a dozen) becoming more or less affected; and I passed most of my leisure time during that summer in experiments with various methods and remedies for its cure. I found as I supposed that it was controllable with Sulphite of Soda. I say controllable, instead of curable, for unless every particle of the zoospores was washed out or reached by the Sulphite, the disease was sure to return; and as they were frequently sealed up with the stored honey, it only remained for the uncapping to start the disease afresh.

I was at the time quite enthusiastic and certain that I had discovered a

quick and ready method of curing foul brood; but when it began to reappear although slowly, and I found that the same tedious process with the atomizer must be gone over with again, and especially as all the pleasure of an apiary was gone when it had to be watched like a suspicious character, and there could be no interchange of combs or bees between the colonies, I resolved to get rid of the trouble and annoyance in the radical way, viz: confining the bees in an empty hive until they had consumed all honey in their sacks (or about three days), then giving them their honey, which had been scalded and strained. In this way I soon had my apiary once more in a healthy state.

Soon after these experiments, Salicylic acid came before the public as a disinfectant and anti-putrescent, and I regretted that I did not have a case of foul brood to try its powers. The next year, however, I had a small hive in which I found some half dozen cells of unmistakable foul brood. I carefully sprayed the hive, and washed out the diseased cells with a strong solution of Salicylate of Soda, and the trouble permanently disappeared.

This summer, in July, I found one of my colonies badly diseased, and as it was one of five that I had freely exchanged combs or given from the same old combs that were stored together, I immediately opened the others and found all more or less affected. One, however, had only a few dead larvae in one comb, and these I pruned out, and gave no other treatment. The trouble has not returned in it. I have always thought that if the disease can be detected sufficiently early and is pruned away before the attempt to remove it, the colony is safe.

One of the others I reserved for Salicylic acid treatment experimentally, and the others were treated on the Quinby plan. (See Mr. Corey's interesting article in July number.) I however, did not confine the bees after they were put in empty hives, but let them fly freely on their stands. I put them in empty box-hives without frames for four days, carefully destroying any comb they may have made. It was at the season when forage was getting scarce, and they did not make four square inches of comb altogether. After four days I gave them their permanent hives in various conditions, viz: One had only empty frames, one had empty combs, one had combs with brood in all stages, and one with a frame of comb with eggs one or two days old. Here, certainly, were con-

ditions favorable for the development of the disease, if the bees retained any virus in their sacks or about their bodies. The old combs were melted for wax, and the honey scalded and fed back to the several colonies, which stimulated them so greatly that they grew rapidly strong, and to-day (two months) are healthy, strong, and in every respect perfectly satisfactory.

The treatment with Salicylate of soda was not successful. When I used it five or six years ago I was greatly pleased with the result; but as there were only a few cells diseased then, the result was the same as pruning, only not so safe. The disease had not affected the hive outside of the cells containing the virus. In the hive selected for the Salicylic trial, the treatment was made as thorough as possible. Every cell which showed any signs of disease was uncapped and washed out, and nearly every healthy cell was opened in the search for the disease. The bees and combs were thoroughly sprayed, and the frames with adhering bees were put in a clean hive and honey-board. In three weeks I again opened the hive, and found it still thoroughly taken possession of by foul brood; that I resolved to treat radically as I did the others. The only difference was in the mode of separating the bees from the combs. As the honey supply had failed there was danger of robbing and diffusion of the disease among my thirty healthy colonies if I opened the hive for any length of time to brush the bees from the combs into an empty hive. I therefore carried the hive late in the day in the bee house (winter quarters), and after closing the entrance of the hive, put the bees asleep with puff-ball smoke. However distressing it may have been to the bees, for the operator it was a delightful way of handling them—no filling up of sacks with poisoned honey, no intruders from the outside; all the bees perfectly motionless and as easily brushed into an empty hive as so many dead flies. In twenty minutes they are again conscious, lively and amiable.

The most practical and interesting question to me is, how did the disease originate? After being free from it for some five years, with the combs and hives in constant use without a trace of the trouble, it is not reasonable to suppose that it originated from any germs which had laid dormant during that time.

I can only account for it by supposing that some of the combs which I stored up last fall after uniting, had become foul from fermentation of the

unsealed honey and from the droppings and urine of mice which had made their nest in them.

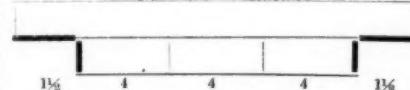
I agree entirely with Mr. J. Corey in his views, but wished to make a fair trial of Salicylic acid for my own satisfaction.

New Bedford, Sept. 7, 1879.

For the American Bee Journal.
Queen-Introducing Cage.

J. E. MOORE.

The "Old Reliable" A. B. J. for September came to-hand August 30th, and I was very favorably impressed with your illustration and ideas in regard to a queen-introducing cage, but think the construction of the cage objectionable. A strip 16 inches long by $\frac{3}{8}$ wide covers up too much brood. I send you a shipping and introducing cage by mail, which I have made of such stuff as we had on hand, so size is not the same as given in the JOURNAL. To make it the same size as yours, take a strip of tin $15 \times \frac{3}{4}$ inches, and notch the ends $1\frac{1}{2}$ inches long by $\frac{3}{8}$ deep, $5\frac{1}{2}$ inches from both ends on same side; take the strip to a tin-shop, and get turned over $\frac{3}{8}$ at right angle whole length of strip; fasten a block 4 inches square to the bench and bend tin around, this gives three sides of the cage; turn narrow strips, making the entrance, which is closed by a slide $4 \times 1\frac{1}{2}$ inch. Now fasten the slide so as to hold it square, and lay it on the bench flaps up and lay on a piece of wire cloth cut so as to lap the flaps $\frac{3}{8}$ of



an inch, and while holding it in place with one hand, turn the lap around the edge of the tin; now turn the cage over on the bench and hammer the wire-cloth down, and the cage is made. It is held in place by finishing nails put through the wire-cloth inside of the edge of the cage at the corners; they also hold the slide for the entrance in place. This will also make a good shipping cage, by tacking it to a block furnished with sugar and water. In shipping, I should use a block $\frac{3}{8}$ thick, and make receptacles for food and water by boring nearly through the block say 1 inch in diameter. For water supply, I should cut a piece of sponge to fill one hole, saturate with water, and cover with a piece of perforated tin. In using the one I send,



you will need $1\frac{1}{4}$ inch finishing nails to fasten to the comb.

P. S.—I have made another for trial, and placed a valuable queen under it in the hive since writing the above, and should prefer cutting the strips of tin 1 inch, same as the sample; this makes the cage $\frac{1}{2}$ inch deep so that where ridges occur on the comb in the honey, it can be pressed in $\frac{1}{8}$ of an inch, so the bees will not cut under the cage.

Byron, N. Y., Sept. 1, 1879.

[The objection urged by friend Moore against the cage illustrated in September No. of *JOURNAL* is perhaps well taken; yet, in comparison with former methods of introducing, in cages, the loss in brood is much more than compensated in the eggs deposited by the queen while in confinement on the comb's surface, without taking into the reckoning the perfect immunity of the queen from danger. In every hive, at least one comb can be found with a level surface. One recommendation for the cage illustrated is the simplicity of manufacture—all the material required being a small piece of wire-cloth, a few small nails and tacks, and four little square sticks, while a pocket-knife and tack-hammer constitutes the "kit of tools" required. We have never had a queen released from one of these cages to be destroyed by the bees, but feeling confident of success in the introduction, have sometimes neglected for several days to open the hive and when finally opened, have invariably found the queen released and performing her maternal functions. Where there is much interchanging of queens to be done, and convenient to a tin-shop, we would recommend a round surface-cage, made by using a strip of tin $\frac{5}{8}$ of an inch wide wide, and long enough to form a circle say 2 inches in diameter; then cover with wire-cloth, soldering it at the edge to the tin. These can be made at any tin-shop for about 50 to 60 cents per dozen, and are somewhat preferable to the square cage, in that they do not necessitate selecting a comb with level surface, as the queen can be placed on the surface of any with 2 or 3 cells of capped brood, and 2

or 3 each with honey and empty, then press on your cage, giving it a turn half around, and the work is done. When the bees run over and about the cage, in a natural attitude, it is safe to release the queen by pushing a quill, nail or small peg through the comb from the opposite side, or lift the cage from over the queen; but if the bees are gathered on the surface of the cage, with their abdomens downward bent, as if prepared or trying to sting, better leave her caged a few hours or a day longer.—ED.]

For the American Bee Journal.

Apiculture in Florida—No. 3.

R. H. M'INTYRE.

In my last, June 16th, I did not think the prospect at all favorable for a good year, but it has turned out to be a very good one. Our bees swarmed very little in the spring, but did all through the month of July. The low palmetto bloom was very rich: it came in June and gave them a strong start. Then the cabbage palmetto came in July and was the richest it has been in this vicinity for a number of years. Both of the palmettoes make beautiful white honey. The cabbage fully equal to white clover in appearance, but has not a decided flavor, and is a little thinner than clover. Our honey here never granulates or gets hard; I presume it would in the North in cold weather. The cabbage bloom lasted fully 6 weeks this year. It is now over, and with it ends our honey season, although there is something the bees can get almost every month in the year.

There is no month that queens do not lay. If we cannot find eggs at any time, we consider the colony queenless and take the proper steps to furnish them with a queen.

My cheap bee house is a success. I now have the posts in water, so as to keep them clear from ants; a large red ant. If they make a raid on a hive they are sure to win in the end, for it seems as if their forces were inexhaustable: no matter how many are killed there are more to fill their places. They do not kill the bees, but tear their wings so they cannot fly. They soon have most of the colony out on the ground trying to fly, while they devour the honey and young bees. They do not often attack a strong colony, but I have known them to, and they are sure to



destroy the bees if left to themselves. Our home market for honey is very small. The only way we can ship our honey to market is to extract it. At present prices the cost of transportation almost eats it all up, leaving very little for the man who did the work and got the stings.

I believe bees are crosser here than anywhere else. I have some hybrids, and no cold-draft smoker does them; it wants direct action, and strong at that. But they beat anything in my apiary for honey, and a moth miller or robber has no business fooling around their entrance. But if there are any sweets to be stolen they are sure to be there. I think bees rob worse here than North. There is hardly ever a time when they will not trouble any one that is extracting out of doors, at least that has been my experience here.

I am much interested in the reports of the different Bee-Keepers' Conventions which are given in your valuable JOURNAL. I hope we shall have a Florida Bee-Keepers' Association, with smaller societies in each county, before many years. So long as we do not have them ourselves, I advise every bee-keeper in the State to subscribe for the AMERICAN BEE JOURNAL, where he can find all of the doings of the various Associations, as well as a notice of everything that is useful and necessary in the apiary for the comfort of the bee-keeper or the bees themselves.

Daytona, Fla., Aug. 16, 1879.

For the American Bee Journal.

In Memoriam.

DIED—Suddenly at his home in Appleton, Outagamie Co., Wis., on Tuesday, July 29, 1879, at 7 o'clock p.m., Alexander H. Hart, aged 74 years, 11 months and 22 days; a veteran bee-keeper of the Northwest.

His health had been failing for more than two years past. A very severe and prolonged attack of neuralgia in the summer and fall of 1877, brought on by excessive labor in the apiary during the abundant honey harvest of that year, and from which he never fully recovered, left him in feeble condition. Though he attended to all the interest of bee-culture with unabated zeal, he has not since been able to endure exposure or fatigue as in former years. For a few days previous to his death he was more feeble than usual, suffering extremely at times, although able to walk about his room. The day on which he died he was very much better, was about the house during the day, and at evening, as was his custom,

went to the bee-yard where he was found a few minutes after lying on the ground in an unconscious state, in which he immediately expired.

Mr. Hart was born in Amsterdam, Montgomery Co., N. Y. He was left an orphan in early childhood, dependent entirely upon his own exertions for support and education. His boyhood and early manhood was passed in his native State, where he was known as an excellent mechanic and a most skillful maker of iron implements; but of late years he has lived on a farm and devoted much time to bee-culture in which he took great delight. In 1835 he moved with his family to Ohio, where he became identified with the anti-slavery society, in which he was an active and zealous worker, acquainted personally or by reputation with many of the prominent leaders of that movement. In 1848 he came to Wisconsin, and in 1853 was elected member of the Assembly of this State. For 13 years was a resident of Stockbridge, Calumet county; while there he was a long time superintendent of the Congregational Sunday School, and a communicant of that church more than 50 years. Nine years since he came to Appleton where he formed a large circle of appreciative friends.

Mr. Hart was a man of large and varied information. He gave much time to study, and received several patents on important inventions. He read many books; very few laboring men own a library as extensive as his. In former years he read and purchased many medical works, and could have practiced medicine creditably to himself and acceptably to others, had he wished to do so. In sickness he was the counselor of his neighbors, and in all matters pertaining to bee-culture his opinion and teaching was considered standard authority.

His sympathies were always with the poor and oppressed; no wronged or injured person, especially if a child, ever escaped his observation or asked his aid in vain. Always progressive, he was interested in every reform; was ever active in the temperance cause, and at the time of his death was a member of the order of the Temple of Honor. The life of Mr. Hart from infancy to old age was crowded with disaster and affliction, but his genial nature was never soured by trouble or sorrow. He was remarkably cheerful and social—a pleasant word for all and wonderfully kind to children, by whom he was familiarly known as "Uncle Abe."

Three times during his eventful life



he was left with a family of motherless children, two of whom died in infancy and three in womanhood—the last of them, Mrs. Pameala Tanner, with her two little ones perished in the "Pesh-tigo Fire." He leaves a wife and nine surviving children, all of whom were present at his burial except Mrs. Ada Ballou, of San Francisco.

By his death his family have lost a kind husband, an indulgent father, a wise counselor, and the community a valued citizen and respected friend.

Extracted Honey.

REV. O. CLUTE.

The market reports in the large city dailies give quotations of "strained honey." All know that strained honey was formerly pressed out of old black combs that were taken from the box-hives after the bees had been brimstoned. To any one who ever saw honey strained in the old way, its association with the juices of half-grown bees is by no means appetizing. At the best it usually has a dark color and a rank flavor of bee-bread. As to its production, all intelligent bee-keepers will agree in the advice given by Punch to couples about to get married—"Don't."

A serious evil which strained honey has created is the tendency, among nearly all, to put all liquid honey in the class with it, and so to do great injustice to "extracted honey." Extracted honey is honey in its purest shape, and to class it with the pollen-spiced, maggot-flavored strained honey, is like putting the nectar of the Olympian gods on a par with forty-rod whisky. All bee-keepers should endeavor to have the real character of strained and extracted honey fully known, and should labor to convince the public that extracted honey is in the purest and most cleanly condition. Like all new articles of food, it will take time to make its merits widely known. When people become acquainted with its real merits and its cheapness, there is no doubt but it will be in large demand.

But this wide popularity can be obtained and maintained only by producing an excellent article. To this end bee-keepers must strenuously insist upon two things: that the honey shall be sealed or just ready to be sealed before extracting, and that it shall have no suspicion of adulteration.

The nectar gathered by bees from flowers cannot be called honey until the evaporating or ripening process has so far gone on that the bees are beginning to seal the cells. Some bee-keepers advocate extracting as fast as the honey is gathered. It is quite clear, however, that honey so extracted lacks very much in the delicious flavor that belongs to a good article. If we are to build up the market for extracted honey, we can do so only by giving a genuine honey, and not the crude, watery nectar as is first gathered from the flowers.

The ease with which extracted honey can be adulterated, and the large profits derived

from the cheat, have in a few cases led to such dishonest practices as seriously to injure the bee-keeping business. There are probably only a few individuals and a few firms that have been guilty of this fraud, but their guilt is a damage to every bee-keeper throughout the country, for in the general ignorance as to extracted honey, whatever tends to cast suspicion on it, decreases the demand for it and so lowers the price. Hence there has been need on the part of bee-keepers for agitation against the practices of unscrupulous men who are selling glucose or grape sugar for honey. We may hope that the conviction and punishment of a few of these scoundrels will effectively end the fraud. In self-protection, the various local and State organizations of bee-keepers, and the National Association, should employ experts to examine all suspected honey, and should prosecute vigorously every person against whom good evidence of adulteration can be found.

Comb honey has such intrinsic qualities of excellence and beauty that it will always be in demand. A pure article of well-ripened extracted honey also has most excellent qualities which, when known, will commend it to wide favor and secure for it a large consumption.

Johnson County, Iowa.

For the American Bee Journal.

New Mode of Transferring, &c.

J. D. ENOS.

The "Old Reliable" comes regularly and always some new item of interest. I would like to give your readers an idea of fixing the comb in frames that I have never seen in print on your side of the Rocky Mountains.

I fasten the comb with wires which secure them and is more easily adjusted than any way that I have ever seen or heard of; would like to have you try it and if you find it speedy and practicable to give it to your readers and bee-men, or women in particular. After having fitted the combs to the frames, or rather before, take the frame that is to hold the combs, get some No. 14 annealed wire bend $\frac{1}{4}$ inch at right angles, then bend at right angles the width of the top-bar from that, then measure from the top of top-bar to bottom of bottom-bar and bend parallel with the last bend and cut about $\frac{1}{4}$ inch from the angle, leaving an end $\frac{1}{4}$ inch long. Now to use it, fit the comb as usual to the frame, take an empty frame and fill one side with as many wires as are necessary, by fitting it on the top-bar first and pulling it down so that the $\frac{1}{4}$ inch end slips under the bottom-bar (I generally have two light boards the size of frame or very little larger, the comb resting on one of them), then press the frame down over



the comb, lay a light piece of board over the wires, take comb and frame up between the two pieces of board, turn them over so that the bottom side is uppermost; slip more wires on the now upper side, and the job is done. I always have a lot of wires on hand to fit the frames and they can be used again and again. The shape of the wires finished is thus:

[Diagram showing a wire bent into a U-shape with a horizontal bar across the middle, representing the wire used to hold the comb in place.]

If the long side is made a little bowing they will always spring against the comb to keep it in place, and the top can be made to fit so that it will never come off by accident. The wire does not interfere with the bees so much as strings or sticks; the bees cannot bite them and the bottom-bar cannot sag; they can be removed without jarring the comb, and if left on all season, as I have done occasionally, do not seem to discommode the bees. I like No. 14 wire best, as it is stiff and sure. In case the comb does not come down to the bottom-bar, I place the frame bottom up so that the comb presses against the top-bar, and put a temporary bottom-bar in bowing, so that the ends rest inside the end-bars, and touch the bottom-bar, and the bow pressing firmly against the lower part of comb; then with the wires on the bottom-bar cannot sag; and it will press against the top-bar while the bees fasten securely. With these wires it does not matter whether the transferred comb is full of honey or not; there are no strings to tie with honey-daubed fingers, and one can do transferring without any trouble, and with a great saving of time. I have used them for two seasons, and have seen nothing to beat them. I charge nothing for the patent, and only ask for the credit of originality, if found practicable.

I am using the Langstroth hive and frame, but on account of bees swarming so in this climate have increased the depth of some of my hives, giving a frame $10\frac{1}{4}$ inches perpendicular; have the pure Italian bee (50 odd colonies); have worked comb honey in sections, size of sections 6 inches horizontal, $5\frac{1}{2}$ inches vertical, $1\frac{1}{2}$ inches wide, $\frac{1}{4}$ inch thick; use tin separators, and tier up when necessary; hives from 5 to 8 feet apart, and 3 or 4 inches from the ground; no shade yet; clip all queens after laying; have returned swarms, cut out queen cells, and given more room; ventilated as much as possible, but bees did not give much comb in sections until late that was all capped over; considerable was nearly capped

for a long time, and got discolored before being finished, though the second-story frames were all sealed over in some hives, and one hive last week had 21 frames and 27 sections, the sections same as I gave them in March, and 15 frames solid combs, the balance full of brood, and young queen just having laid, the colony filling the hive did not swarm out at all, but have banished their drones. I still have drones, and among some 90 or more queens had only one drone layer. Bees would work lively for a day or two and then the honey flow would appear to cease. I shall have about 1,500 lbs. of surplus this season; shall have several hundred lbs. of comb honey, have had to extract considerable from sections on account of not being filled out. There has been but little surplus honey in this neighborhood, owing somewhat to want of care given to the bees.

In the southern part of the State bees have fared worse. One bee-man in Ventura county, tells me he has 400 colonies of bees. He built 1,000 hives last winter, and filled them with foundation; piled them out-doors ready for swarming; will lose one-half his bees by starvation; and had no increase by swarms at all. The general complaint through the southern part of the State especially, is that bees are starving. The cold weather and late wet winter kept the flowers from blooming. The white sage, on which they depend, was almost an entire failure. The flowers of this section, 45 miles north of San Francisco, are different and I think of more variety than that part of the country. We had not so much bloom as we generally do, but we have not so many heads of stock as they do. It looks as though there might be a conflict between the herders and bee-men in the future, though in time, when the country becomes more settled, the stock will be more scarce. This part of the State is more settled and wild land is scarce; we naturally have more water. Our best season is when every other part of the State is suffering from drought. Napa Valley never fails entirely of a crop, and is considered sure.

I think if the same interest was shown in this section, that the honey would make a better showing. The honey, except in the valley, has a better flavor, and is more like the eastern honey. I have heard of a few cases of foul-brood, but have never seen it; am entirely free from it, and know but little of moths from experience.

I use the extractor, and comb-foundation. I use pure wax which can be bought here for 27 to 28c., and am



not troubled with sagging; have had it built out in three days; out of 50 or 60 colonies have had only some 5 or 6 frames of comb to break down from any cause. I conclude that the few cases were from having foundation filled with honey too soon after being built out instead of having brood, but it has given no trouble. When I find a comb broken, I slip on transferring wire to top of frame push in lower part under the lower-bar on both sides, and take it up, bees and all, without trouble, after removing comb on each side if necessary.

Sunny Side, Napa, Cal., Aug., 1879.

From the Michigan Farmer.

Manual of the Apiary, Etc.

FRANK BENTON.

[COOK'S MANUAL OF THE APIARY: Published by T. G. Newman & Son, Chicago, Ill. Illustrated, 12mo.; cloth binding; per copy, \$1.25.]

It will be remembered that I have several times recommended those who wished to become familiar with improved methods of managing bees, to secure a copy of Prof. A. J. Cook's excellent work, "Manual of the Apiary;" this I have done because a careful perusal of the work had convinced me that it is just the one to serve as a complete guide in aparian matters. This recommendation can only be repeated now, and if anything with more emphasis than before, for a copy of the last edition just received from the author shows valuable additions to the contents and improvements in the text. The work has been improved mainly in the following particulars. Under the head of feeders an illustration and a description of the division board feeder which the Professor has invented and experimented with since the previous edition of his work, has been inserted; management of colonies containing fertile workers; and the addition of an illustrated appendix giving a history of movable frames, treating of several recently mentioned insects injurious to bees, describing the tulip-tree louse (*Lecanium tulipiferae*-Cook), which is so destructive at times to the tulip (whitetewood) trees, but which secretes a sweet substance often mistaken for honey-dew and as easily appropriated by the bees; further, the appendix contains as an addition to the large list of honey plants given in the body of the work, several descriptions and illustrations of valuable plants, and also a representation and description of the honey comb coral so often spoken of as "petrified honey-comb," but which the Professor says is the work of little polyps that "existed millions upon millions of years before any flower bloomed or any bee sipped the precious nectar." Altogether this book of over three hundred pages, with its appendix and full alphabetical index, clear type and fine illustrations is just what every one interested in bees ought to have and which no one who obtains it will regret having purchased.

ARRANGEMENT OF COMBS.

It is not too early to begin to think how we are to winter our bees and how near each colony will come up to the standard deemed essential to success in the particular method chosen; so, too, we should begin to act—to arrange so as to have each colony in prime order when the final work of packing, housing, or putting into pits or cellars comes.

Besides having a vigorous young queen, plenty of young workers, and abundance of stores—pollen, sealed honey, etc., another point is worthy of early attention, namely: the arrangement of combs in the hive—not alone the arrangement with reference to a honey supply during the winter, but also with due regard to the needs of the bees when they commence breeding early next spring. If we expect to secure the best result for the honey and pollen consumed and the bees employed in brood rearing, we must not neglect the last mentioned point.

It is of course essential for one to know the various kinds of comb when he sees them, and then to know in what part of their habitation bees that are in the most prosperous condition choose to construct these kinds, and, going a step further, he must learn the use which the bees make of these different sorts of cells and in how far he must follow Nature, in his management of the combs. Aside from a few queen cells, the comb of a hive is made up almost wholly of two sizes of cells, namely: those one-fourth of an inch across—four of them side by side measuring an inch—sixteen covering a square inch of surface, and those measuring one-fifth of an inch across—five side by side measuring one inch—twenty-five being needed to cover a square inch of surface. Comb made up of these coarse cells may be used to rear drones in or to contain honey. The smaller cells are such as worker-bees are reared in, and may be used as receptacles for honey or pollen. Very few young bees are reared in cells that are not regular hexagonal prisms, and comb made up of small cells when devoted to the production of workers must be only seven-eighths of an inch in thickness; one and one-fourth inches is about the thickness of drone brood comb. When not occupied with brood these cells are, as previously stated, often used for honey, and, in this case; if the combs are far enough apart to permit it, the cells are lengthened out considerably; and when the bees wish to use them again in brood-rearing they are cut down. Now the tops and corners of the frames, as well as the outside frames, often contain cells more or less irregular, sometimes such as slant upwards instead of being horizontal; into all such the queen will never put eggs, unless compelled to do so by a lack of regular cells in which to deposit them; then suppose we were to separate the brood-nest (which is usually nearly spherical in form) into two parts by the insertion of a frame nearly or quite made up of these irregular cells, the queen will find it necessary to go around this comb, or confine her laying to the combs on one side of it, which latter will surely occur as the season approaches a close and the bees fill the inserted comb with honey;



while early in the season such a division of the brood-nest is very likely to bring about quite disastrous results by preventing the bees from clustering on the brood so as to keep it from chilling. But suppose in the fall work with the bees, not having brood in many of the combs we cannot tell except by the size and character of cells which combs ought to have a place near the center of the hive where we want the brood-nest to be established the following spring, and which ought to be placed outside or left out altogether, and suppose by chance we get one of these combs of irregular or deep, crooked cells, "store combs," as they are called, near the center, then when the bees commence brood-rearing, the latter part of the winter, they will cluster on one side of this misplaced comb, and when we open the hive in the spring there will generally be a smaller area occupied by brood in such hives than in such as have had their combs better arranged and are equal in other respects. If, however, the comb happens to be suitable for drone brood the queen will not be slow in finding it out, and we will have a great lot of those big-headed, lusty fellows—the drones, in process of development.

Let us examine now the arrangement of combs, brood and pollen in a model colony, that is, one in prime working order. Taking it early in the season we find the bees gathered between the central combs so that the cluster is nearly globular in form, its center being at the center of the hive. Within this cluster and about the center is arranged worker brood, the quantity contained in each comb being less as we leave the center; thus, with the exception of the space between the combs, the brood presents a spherical form. Only a few cells of honey and pollen are scattered among the brood, and I might remark just here that compactness in the arrangement of brood is one of the points of superiority of Italian bees; the developing larvae and pupae generate heat, which favors brood production, besides a smaller number of mature bees is required to cluster over a given number of occupied brood cells. Just at the edge of each circle of brood we find at the top and at the sides, pollen-cells—a strip two or three cells wide; on either side of the space occupied by brood is a comb whose cells on the surface toward the center, are almost wholly used as store-cells for pollen. The honey occupies the space outside of the pollen, that is, the tops and ends of the frames and the entire body of the outside combs. As the season advances the bees enlarge the sphere of brood, and store the pollen farther from the center of the hive, using up the stock first gathered. This matter will certainly be plain if we let a hatter's block represent the spherical brood-mass; the hat which he puts on the block, the arrangement of pollen-cells; and the air outside, the surrounding honey, which extends, when undisturbed, as far as the harvest and the gathering force of the colony will admit.

We are to conclude then, that the body of each comb and most of the combs must be composed of worker brood cells, and that if there are any combs containing drone cells

or irregular cells they are to be placed *outside of the brood-nest*. To this, however, there is one exception: the colony having a queen from which we wish to rear drones should have one or two frames of drone comb placed near the center.

With comb foundation and care all this can be attained, and the increased amount of brood reared will repay the extra attention and expense.

PROSPECTS FOR HONEY.

The prospect for a good yield of linden or basswood honey is very good. It rarely happens that these trees, *Tilia Americana*, blossom as profusely as they are about to this year, even very young trees are covered with buds, and already their fragrant, delicately yellow blossoms which droop in graceful tassel-like clusters, are unfolding their honey laden depths which the eager bees do not pass unnoticed.

The linden honey ranks very high, being light, good flavored, and free from the peculiar quality which makes clover honey, as well as some other kinds, leave a burning sensation in the throat. When first gathered it is very aromatic and possesses an agreeable minty flavor, and all things considered, is "not bad to take." It crystallizes sooner after having been gathered than do some other kinds, but now that the crystallization or "candyng" of honey is very generally known to be an evidence of purity, this is no objection.

The linden commences to blossom in different parts of our State from July 1st to 15th, and usually continues about 2 weeks. At this time of the year the colonies of bees if they have been rightly managed, are always strong in numbers and thus able to send out a large gathering force, especially as few bees are needed to care for the brood. Several other plants would each probably furnish as much honey under the same circumstances as does the linden, but the best reports have come from the latter. It is quite a common thing during the best days of the linden harvest for a good colony (one hive) of bees to gather 10 or 15 lbs. of honey per day, and many report much larger yields. One man, Mr. J. W. Hosmer, of Minnesota, whose word I have no reason to doubt, stated some years ago in the AMERICAN BEE JOURNAL that one of his colonies stored 51 lbs. of liquid honey in one day during the linden yield.

It is a popular, yet erroneous, idea that bees gather just as much honey one pleasant day during the working season as any other day. Frequent examination of surplus honey boxes placed on the tops of frames or hives, or the use of the honey extractor will dispel this notion; or another way is to have a hive containing a fair colony suspended by means of a spring balance and note daily increase (sometimes decrease) in weight. This is especially valuable during such a yield as linden or buckwheat, and when no after harvest can be expected, for it is then advisable to continue taking honey as long as possible, and still not deprive the bees of winter stores. Corn-tassels sometimes furnish quite a supply of honey just after the linden, and later still, buckwheat, where abundant gives nearly always much



more than is needed for winter stores; while if golden-rods and wild asters are plenty, it is generally safe to extract most of the linden honey.

Even though the linden yield should be large, the probability is that the prices of honey in our own State will be kept up as high as they have been during the past season, on account of the losses in wintering since last year's crop.

THE USE OF A BEE-SMOKER.

Supposing each bee-owner has supplied himself with that indispensable adjunct of every well-appointed modern apiary—a bellows smoker—I will say something about its use. The material burned may be cotton rags, rotten or solid wood, in fact, anything that will burn; yet for most purposes I prefer wood that has commenced to decay—that is, merely brashy; wood of the harder sorts when it has reached this condition will burn well, give a good smoke, and yet will last very well. The disagreeable smell of burning cotton rags will remain about the clothing of the operator for days even, and this alone is enough to condemn them.

With the smoker well lighted, a screw-driver in hand, and the face well protected by means of a bee-veil, the bee-manipulator proceeds to the apiary. This bee-veil, by the way, is made by securing together the ends of a yard of black bobinet or crêpe-lace, and gathering with a piece of rubber cord the upper end of the bottomless sack thus formed, so it will fit close to the hat-band when the whole is drawn over the head. It may be well to blow a little smoke in at the entrance of the hive; the bees, thus alarmed, will eat honey and become good-natured. Next, with the screw-driver pry up the cover, and as soon as possible drive some smoke under it; lifting this off the combs can be got at. Select one of the straightest of moderate thickness, shove the others away from it and lift it out. Thus all can be examined and everything put back as at first, and if great care be taken in removing and inserting combs, and no quick movements be made, not a bee will resist the liberty provided the smoke be used freely at first. If, however, the bees seem inclined to show their notions regarding this seeming interference in their domestic affairs, a few whiffs of smoke will send them down, buzzing submissively, among the combs. Thus the experienced apiarist seems to say: "Children you now have to deal with your father, and you must behave right well;" and he handles them tenderly, gently, admiringly, even as a father does his child.

But there is another reason why it is best to avoid "bruising" a single bee. The poison, formic acid, given off by the bees has a very penetrating odor, and, as the wine Bacchus gave to the Centaurs, when drawn by Hercules, brought down upon poor Pholus the angry giants, so these little insects, scenting the destruction which has been wrought, will be roused to action, and the luckless bee-keeper plays the part of Pholus whether he will or not. Happy is he then if his Hercules—the Bingham smoker—is at hand to put to flight the pygmies which have so soon become Centaurs.

Ordinarily only a small amount of smoke will be needed, especially with care in handling combs, and oftentimes the veil will not be necessary. When the bees are in the midst of a great honey harvest no veil or smoke will be necessary. Then, too, after a time you will not mind the stings so much, for, after you have received a thousand or so, it'll not hurt or swell so much afterward.

From the Nebraska Farmer.
Nebraska Bee-Keepers' Association.

GEORGE M. HAWLEY.

While in conversation with apiarists from different parts of the state, many have intimated a desire for a state organization for the advancement of bee-culture in Nebraska. Nearly every state in the Union has an organization of this kind, and finds it of great value to its members, and a benefit to those who cannot attend, but read the report through the press. It would seem as though such would be of great benefit to the Nebraska bee-keepers, and especially to the new comers, who contemplate keeping bees, since the honey harvest here is at the other end of the season from what it is in the East.

The old adage, "A swarm in July is not worth a fly," will hardly apply here, since many a swarm in September have filled their hive with sufficient honey to keep them well through the winter. The new comer should be conversant with these facts in order to secure the best results from his labor. By an association of this kind each becomes incited to greater efforts, and strives to delve deeper into the mysteries of bee-keeping than he has heretofore explored, and the result is that we obtain more honey in nicer shape for market, and in our combined efforts secure a better price for our honey. During State Fair would be as good a time for an organization of this kind to be formed as any, since bee-keepers from every part of the state will probably be in attendance. Let us hope that something will be done to promote the advancement of this industry before another year passes by.

From the Western Agriculturist.
Amateur Bee-Keeping.

EDSON GERRY.

In order to make bee-keeping pay, it is necessary that we prepare ourselves for the business that we may make a success.

First, we should be provided with such books as treat on aparian science, read and study them, until we have become posted as to the nature, habits, and instincts of the honey bee, that we may be able to manage them, so as not to cross their nature in anything we may do. Whenever our acts are in accordance with nature, we shall be successful; whenever we do anything contrary, it will interfere with their labor and prosperity. If we would succeed, we must understand the best manner of management. A man may have a large number of colonies around

him, and yet be very far from being a practical bee-keeper. The hive, the bees, and all their surroundings, must be kept in good condition. Then, due attention, in proper time, will insure success. Without the necessary knowledge, it is useless to be to any expense, or to have anything to do with them. Many persons now keeping bees, receive no profit or benefit. Bee-keeping when properly managed, is a remunerative business, and is especially adapted to men who have become debilitated or are advanced in life, and ladies who are dependent on their labor for their support. It is an easy vocation and within the ability of invalids. Many who are not sufficiently strong and healthy to perform hard labor, can attend to an apiary, there being but little labor required after they are once put into proper condition.

Thus it will pay to devote a little time and money to become posted in the best and most successful management. It is better to first send and get ideas of experienced bee-keepers, than to learn by experimental knowledge just what to do, and when.

For the American Bee Journal.
From Western Illinois.

WM. CAMM.

I do not want my name to be put in the column of "blasted hopes." I will acknowledge that I am sorely disappointed, for this was the first year that I had counted upon any income from my bees, and although I started with nearly four times as many as I did last spring a year ago, I shall not get half so much honey in any shape, and indeed it will be more than I expect if all make enough to winter on; but I will not admit that I am discouraged. All outlay for hives and boxes will keep till another season, and such a drouth as this will not come every year. I have no melilot, but it does seem to me that if there is a plant that it would pay to cultivate for honey alone it is figwort (*scrophularia nodosa*).

In my thick double-walled hives I find it best to cut the entrance $\frac{1}{4}$ or $\frac{3}{8}$ deep inside, but $\frac{5}{8}$ or $\frac{3}{4}$ outside, then the returning bees fly almost into the hive and over those going out, for the latter always run some inches on the alighting-board before taking wing.

To stop robbing, close the entrance blocks to suit the case, and then lay upon them a piece of board as broad as the block, and shove it back against the front of the hive so that the robbers cannot get down behind it.

Where a black queen is mated with a yellow drone, her progeny are gentler and more industrious than the blacks, this I know; but when a yellow queen meets a black drone the result seems to be a cross lot of chickens. Wishing

lately to introduce a yellow queen, I placed the cage containing the Italian queen upon top of a neighboring hive until I could find and remove the black queen. After looking over the comb once I had to carry the hive into a building out of the way of robbers, leaving nothing on the stand. I failed to find the black mother-bee, and meanwhile, as many bees had taken wing, a good swarm had clustered on and about the cage which had the yellow queen in it. I removed a black queen from a weak colony, placed the caged Italian in it, and let the bees run in, and now they are working like a natural swarm. I mention this, because it seems to me there is something in it that might be utilized in making artificial swarms.

Winchester, Ill., Sept. 7, 1879

From the Farmers' Review.

Hints on Wintering Bees.

PROF. A. J. COOK.

In view of the serious losses by bee-keepers during the past winter, and its two or three predecessors of the past ten years, there is scarce any subject so worthy of attention and study, and so sure to gain it as the one at the head of this article. If we may judge by the past, we may expect these trying seasons about once in three years. Notwithstanding this probability, I feel certain that the wise and *painstaking* apiarist has nothing to fear; more than this, I believe these trying winters will be to his advantage, on the principle of the "survival of the fittest." The careless, ignorant bee-keepers, with their unmarketable honey, will be weeded out, and he will be spared competition. This is a double advantage, as it is the ill-prepared honey of these ignorant, slovenly bee-keepers that most depreciates prices.

It seems more and more certain that wise forethought and corresponding action is going to bridge over these dreaded disasters. I know of no one in this vicinity who knew how, and practiced what he knew, that suffered loss the past winter. I know a few who knew, but were too negligent to act, hoping that good fortune would make it unnecessary, who lost heavily. I know many more, who neither knew or practiced, who lost all or nearly all.

That we may the better fortify against the dangers that are sure to confront us sooner or later, and may any winter, let us learn what these evils are.

Experience proves very clearly that very severe cold, even for two or three weeks, is dangerous to bees. This may work evil in two ways: The bees feel the chill, essay to move, and drop from the cluster and perish. With more activity, they eat more, and thus may use up the honey where the cluster is formed, and the surrounding honey being chilled and inaccessible, the bees actually starve. If the cold be long continued, the danger is greatly augmented. Extremes of



heat and cold, are also detrimental, especially if the bees are prevented from flying. With either heat or cold the bees become uneasy, eat more, and unless they can fly become disengaged and die.

The sorrowful experience of bee-keepers near by cider mills and sorghum presses, clearly demonstrates the importance of good food. This is doubly important during winters of long continued cold, when bees are unable to fly for long periods. It is often noticed that bees about cider mills are healthy in Autumn. It is only when the cold of winter shuts them in-doors that they succumb to dysentery.

The worker bees after a few weeks of active labor, wear out and die. Such bees are ill prepared to brave the dangers of a trying winter. If the bees breed actively till October, there will be no danger from this source.

Excessive moisture in and about the hive is thought to be a source of danger to the bees. This seems more than probable, as dampness and warmth always promote the development of fungus growths, which as evils are more insidious because they are often invisible without the microscope. These may not only affect the bee through the air which it consumes, but also by contaminating its food.

To secure a uniform temperature of about 40° Fahrenheit—it may safely vary 5° either way from this—we must in some way protect our bees. We may do this by using a dry, dark, well ventilated cellar, in which they must be placed before severe cold weather commences—about middle of November in this latitude, and till the flowers come, about April 1st here at Lansing, Michigan. To secure good ventilation, a pipe should extend from near the bottom of the cellar, and connect with a stove pipe or chimney above. Another pipe should connect the cellar with the outside, but should run for 20 feet under the ground, so that the air as it enters the cellar may be warmed by the natural heat of the earth. The depth of this pipe should be about 5 feet. It may be made of tile. Of course the cellar should be perfectly drained.

Houses built above ground may do as well as cellars, if they are so made as certainly to secure a uniform temperature. Setting these in a side hill will aid in this respect. Such houses would need no drainage, but should be ventilated the same as the cellar, except that it may be difficult to connect the pipe for the escape of foul air with a stove pipe or chimney above. In either of the above cases, do not remove the bees during the entire winter if still quiet. If they make a loud noise along in February or March, or soil the entrance to the hives, then they should be carried out, the first warm day, for a flight, and returned to the cellar or house at night. With proper care this will seldom be necessary.

We may also secure uniformity of temperature by surrounding each hive, or 2 or 3 hives set close together, by a box, which shall leave a space of a foot between it and the hives. This space may be crowded full of fine straw or chaff, and all kept dry by a cover. A tunnel 5 or 6 inches square, placed at the entrance, would permit the bees to fly

during protracted warmth in winter, and thus be of great service. This box should remain about the bees till May, in the colder parts of the country. Hives with double walls, filled in with chaff, will serve the same purpose. These, however, are large and awkward in summer. By tacking a cloth to the bottom of the upper story, or cover of the hive, this latter may be filled with chaff, which will not only aid in protecting against cold, but will serve as an excellent absorbent just above the bees.

When honey is good and sufficiently evaporated, bees always seal the cells. The finding of uncapped honey in October, therefore, is presumptive proof that it is not good. All such should be extracted. Only capped honey should be left for winter. If there is not enough of this—30 pounds—then feed, not glucose, or grape sugar, or poor sugar of any kind, but either good thick honey extracted early in the season, or good thick syrup made of granulated sugar. This food should be in a space not to exceed one cubic foot, confined by a division board, so that the bees may have to keep only the necessary space up to the required temperature. This is very important, during winters of long continued cold, as the bees are unable to break and reform the cluster, and so must have the honey concentrated in a few frames and not scattered through many, else they will be unable to reach it and will starve, though there be plenty of honey in the hive.

To secure this requisite, the bees must be kept breeding till in October. They will do this, if kept storing and given room. If there are no nectar secreting flowers in August and September, the bees can gather no honey, and the brood rearing will cease. In such cases we must feed a little honey daily. One-half pound is enough. Again, if the fall yield of honey is great, the bees may store so fast as to fill all the cells and leave no room for the queen to lay. Such cases in August and September are very common here. Then we have only to use the extractor and give more room by adding sections and boxes.

I have already spoken of dry cellars, and absorbents above the bees. Could our hives be so constructed as to secure a good absorbing surface entirely around the brood chamber, it would doubtless be an advantage.

Keep the bees breeding till October, feeding and abstracting if necessary. Early in October I would look at the bees, give the proper amount of good honey, extract or remove all that is uncapped, contract the chamber, and put on the chaff. By the middle or last of November, I would surround with boxes or put in cellar or house. In February or March I would examine frequently, and if I found any bees in any hive uneasy, I would give them a fly by removing those in cellar or house to summer stands. Early in April I would remove permanently to summer stands. In April I would keep brood chamber so confined, by use of division board, as to keep all the combs covered with bees, and by exchanging combs of capped brood, build up my weak colonies, so that by the middle of May all should be equally strong. By this course I have ever been spared loss by spring dwindling.

Our Letter Box.

Hainesville, Ill., Aug. 26, 1879.

I have not had much experience with bees till within the past few months, and finding something wrong with them, have come to you for information. I had, as I supposed, 10 colonies in first-class condition, strong and doing well. I am so situated I cannot be with them but about once a month. While home Aug. 12th, I went through my hives to see if all was right. I found plenty of brood, but here and there would be an uncapped cell, with dead bees or larvae decayed and rotten, while some of the young bees that were hatched and trying to get out, but could not—seemed as if they were glued to the bottom. What is the cause? Finding young bees decayed means foul brood, does it not; if so how came it there? Does it come of its own accord, or does it have to be propagated? Now, will you, or some good-hearted writer for the AMERICAN BEE JOURNAL, explain foul-brood in the first stage, and how to cure it, if possible.

W. E. H.

[We fear your bees have that most loathsome complaint, "foul-brood." Mr. E. P. Abbe, of New Bedford, has a very interesting communication on page 450 of this number, giving the result of a series of experiments with this disease. If, however, it should develop into unmistakeable foul-brood, we doubt if the trouble, and risk, and expense would be compensated by their recovery. The greatest caution is required to prevent its spread. Undoubtedly, like everything else, there must have been a "first cause," but we also know it can be rapidly propagated by contact, and here lies the base of the argument to thoroughly eradicate the disease by burning bees, hives, combs, and everything which could possibly come in contact with it, as it long requires the closest watching after a cure is supposed to have been effected, to prevent a return. We are glad to say we have never had any experience with it.—ED.]

North Lansing, Mich., Sept 9, 1879.

I have been looking around for a good site for the establishment of another apiary, and think the most advantageous I have found is in Wood county, Ohio, near the Maumee river. There I find plenty of basswood and a large quantity of melilot or sweet clover, as well as a fair amount of other honey-producing plants. My son, George L. Perry, and myself have an apiary at Lansing; but there are so many bees in this locality that it is, or soon will be over-stocked. There are not far from 600 or 800 colonies within bee-range of our apiary, many of them blacks or hybrids, so we cannot rear any more pure Italians without a great deal of trouble. Where I am going there are no

bees within 6 miles that I can hear of excepting 3 or 4 old box hives. These I will buy or transfer and Italianize free, before I will let them remain as they are. I have been transferring through Michigan, Ohio, Indiana, Illinois, Missouri and Arkansas, for the past 4 summers. My son and partner, George L. Perry, is a graduate of the Michigan Agricultural College, under the tutorage of Prof. A. J. Cook. I shall have a new bee-feeder to give our brother bee-keepers at the National Convention. It is for winter-feeding, and can be used in the coldest weather, without disturbing or chilling the bees. It contains 3 apartments—1 for honey, 1 for water, and 1 for rye flour and will, I think, become a favorite with bee-keepers. I can endorse the AMERICAN BEE JOURNAL as the best bee publication in the world.

SOLOMON C. PERRY.

Richmond, Texas, Aug. 16, 1879.
Enclosed find part of a weed that grows here. Bees work on it all day. This has been a fine season in this county for honey. Other parts of the State have been too dry. From 70 colonies I have taken 6,000 lbs. of honey, and got 42 young swarms. Will get several thousand pounds yet, as bees here gather honey until December. I have established a good home market in Houston and Galveston, at \$15.00 per 100 lbs. in 1 lb. sections, and \$10.00 per hundred lbs. for extracted.

J. W. ECKMAN.

[These are different species of boneset, or eupatorium (see "Manual," p. 238, fig. 97). There are 16 species in the eastern United States.—A. J. COOK.]

Canandaigua, N. Y., Sept. 8, 1879.

Last May I bought 36 colonies of bees wintered in the old box hives with the loss of 2 colonies. They were on south side of dwelling surrounded by board fence on the west and south; the land on the west being about 500 feet above. Most of the bees in this vicinity, at least quite a proportion (from 30 to 50 per cent.) winter-killed or dwindled away in the spring, and the amount of honey made is about one-quarter of last season. I subscribed for your very excellent JOURNAL last June, and consider that I have already received my money value. I have just returned from New York, after interviewing Messrs. Thurber, Quinby, Thorne and others, as to the prospective price of honey in prize-boxes this season. They seem to think its scarcity, by the death of bees and unfavorable season in many of the States, will necessarily make it start in at about the price of last year, viz: 20c. per pound. They also claim that apiarists stood in their own light last season in sending their honey to so many different commission men, claiming that if the market could have been in about four first-class merchants' hands, the early season's satisfactory prices could have been maintained; but that the honey which needs very careful handling, in many instances getting into the hands of butter and cheese and other commission men's hands, who thought it must be disposed of at any price, much fine honey, some in bad condition, was sold at



10c. per pound. If the producers could form an agency, and not build the market, they could control things, and all the honey produced this year could be sold at good, fair, living prices. Honey is a failure in this section. One apiarist who last year sold 8,000 lbs. from 100 colonies, this year has only 1,500 lbs. of surplus. C. G. GIBBARD.

[Our correspondent has raised a couple of points which will undoubtedly receive attention at the National Convention to be held in Chicago on the 21st inst.; especially is there scope for argument on the proposition to centralize the honey trade in the hands of as few dealers or agents as possible.—ED.]

Flint, Mich., Sept. 11, 1879.

Between Aug. 1 and Sept. 1, fed to 14 colonies over 100 lbs. of sugar and honey, and some of them now have less than 3 and none over 10 lbs. of honey in their hives. So much for drouth and early frosts in this section. Presume I may send for more honey soon.

E. M. R.

East Saginaw, Mich., Sept 6, 1879.

In discussing R. R. fare to the bee-keepers' convention to-day, it came to my mind that last year we had tickets offered to us from this place to Chicago, to attend the fair at your place for \$7.00. The same fair will have an exhibition at the same time of the bee-keepers' meeting, and possibly some could avail themselves of those tickets to advantage. I have not yet made positive arrangements to attend but hope to be able to be with you.

L. C. WHITING

Wells, Minn., Aug. 26, 1879.

I enclose you some insects or bugs which seem to be plenty on the golden rod. One of my little boys found a dead bee on golden rod, and when I came to examine it, I found one of the bugs fastened on or holding on to the bee. I have not been able to find any more enemies of the "Blessed Bees." I commenced bee-keeping one year ago last May with 2 colonies of black bees; have now 14 colonies of Italians. I Italianized in the spring. Bought a colony of Italian bees, raised my queens and drones, and kept my black drones cut out. I have now very large nice colonies, and they are working on golden rod for dear life. I live on the prairie where there is neither basswood nor maple. I am under great obligations to Prof. Cook for his valuable work, which has been my constant guide in my operations and successful management of the apiary. J. P. WEST.

[This is *phymata erosa*, described and illustrated in 4th edition of "Manual," page 293-295.—A. J. COOK.]

Kane, Ill., Sept. 5, 1879.

Enclosed find twig and bloom of a plant that grows near my place. It commenced blooming about the first of August, and is yet in bloom. The dry weather does not seem to hurt it. It grows from 3 to 6 feet high, and has a great many prongs and

heavy top. The bees leave the buckwheat to work on this, and at all hours of the day. I wish to know its name and quality as a honey plant, and if healthy I will save seed and cultivate next season. I believe it will pay better than buckwheat, for bees only work on buckwheat 3 or 4 hours per day, while they work all day on this. I do not see how any person can keep bees with success without a copy of "Cook's Manual of the Apiary" and the AMERICAN BEE JOURNAL for their guide. Without them I would have been in the last ditch of "Blasted Hopes" this dry season; but with their aid I have increased 100 per cent., all in good condition.

R. M. OSBORN.

[This is figwort (see Manual, p. 237, fig. 94), often called Simpson's honey-plant. Very excellent.—A. J. COOK.]

Bell's Station, Tenn., Aug. 27, 1879.

I wintered 20 colonies, have doubled my stock, and have taken 1,300 lbs. of extracted and 100 lbs. of comb honey. My bees are swarming rapidly at this time; we call them August swarms. I have had 5 or 6 swarms, all were put back but one, which I built up to make my 40 colonies. They are all in Langstroth hives, in good condition, and every colony has a fine Italian queen. Bees have done very well in this locality this season. There is a move on foot to get a bee association started in West Tennessee, but we have not organized yet. Hope we will do so soon, so we may have a representative in the National Convention. We have some very able men in our midst. If they would make a start, we could have some interesting correspondence in the pages of the AMERICAN BEE JOURNAL from this section.

JOHN H. SMITH.

White Rock, Texas, Aug. 7, 1879.

Bees have done little or almost nothing this season on account of the cold windy weather in the early spring, and the extremely hot and dry weather this summer. A great many bees died during the drouth, but mostly those kept in old box hives and guns. Most of them had been robbed down to the cross-sticks, and starved out of course. Practical bee-keepers have lost but few. Last winter was a hard one on us here, as our bees consumed their stores generally before the winter was over, and starved to death; and another thing, about the first of February, after bees had begun to gather pollen and were getting heavy with brood, we had a "Northerner" which prevented the bees from leaving the hive for about 3 days, which destroyed several colonies that were counted safely through. I had 32 colonies at the commencement of the drouth, some in very good condition and strong; but at one time, about the 20th of June, there was not a frame of honey in the yard, and not one cap sealed; the queens had ceased laying for nearly a month; the bees had been killing drones ever since April 1st, and the most discouraging time prevailed; robber bees from starving colonies prowling about, swarms coming out and leaving and others occasionally coming and settling near or going into some hive

and raising a row with its inmates. But we had a rain June 22d and another the 28th, so that by July 1st we had some prospects for a short honey season. Corn tassel was in bloom, and in a few days were covered with plant lice, dropping their "honey dew" all over the top leaves, and attracting the bees in "heaps and piles." Cotton came into bloom about the 1st of July, and the bees commenced to gather both honey and pollen very fast, considering the depopulated condition of the colonies. I have united my weak colonies, and from 32 I have 25 good strong colonies and in good condition. There have been but few swarms this year in this vicinity, none of which did any good. The Italians are in nearly every apiary throughout this country, graded from the lowest to the highest. Let Mrs. A. S. Keys, of Holly, N. Y., try oil of sassafras for bee-stings. It will not cost over 10c. per ounce, and beats anything I have tried.

W.M. R. HOWARD.

Caddo, C. W., Aug. 25, 1879.

In this letter I send you a bug which has bit me several times at night. The spot on my arm where bitten swelled half as large as a hen's egg. Please tell me what kind of a bug it is. Answer through the columns of the *Post and Tribune*. MRS. M. A. HELM.

[This insect is a true bug of the Reduvius family. Usually the insects of this family are content to suck the juices from other insects, which they destroy in great numbers, and so are our friends. But this one has a less enviable reputation. Even his scientific name has a bloody sound: *Conorhinus sanguisuga*, Le Cont. It is stated in *American Entomologist*, vol. 1, p. 88, that it insinuates itself into beds, like a near relative, *Pirates biguttatus*, Sang., which lives on bedbugs, but unlike the latter, sucks human blood at first hand. While taking its meal it fairly "straddles itself out and seems to enjoy it hugely." Prof. Uhler has received specimens from southern Ohio, with information that its bite causes severe inflammation. The late Dr. Hull was once bitten on the arm by one, and lost the use of this member for three days. The insect is found as far north as central Illinois.—A. J. COOK.]

San Bernardino, Cal., Sept. 1, 1879.

I send a bug to be named through the *AMERICAN BEE JOURNAL*. It is a real bedbug, and stealthily crawls under the bedclothes and while the sleeper is quiet he fills himself with blood; but after a few minutes a peculiar burning and disagreeable sensation follows. This year I have found the little red ant killing them.

GEO. B. WALLACE.

[This bug is $\frac{1}{2}$ of an inch long and wholly black, if we except the tarsi which are reddish brown, and the last two joints of the

antennæ, which are cream-colored. It is closely related to the *conorhinus sanguisuga* in structure, and it seems in habits as well. See, also, answer to Mrs. M. A. Helm.—A. J. COOK.]

Birmingham, O., Aug. 13, 1879.

We went into winter quarters last fall with 45 colonies of bees, about half black and half Italian, and came out in May with 18 colonies, 2 only being black. This demonstrated to our mind the superiority of the Italian over the common bee. They were all wintered on their summer stands; 14 in Gallup frames and 31 in Langstroth frames; 4 of the 31 were chaff hives, and balance improved Simplicity. The bees in Gallup frames were crowded upon from 5 to 9 frames, with division board, and chaff cushion on top. Those in the Langstroth frame were put on 5 to 7 frames, with chaff division board at each side and chaff cushion on top. Of the 14 in Gallup frame only 5 came through alive, and these with but little honey; while those in the Langstroth frame seemingly had as much honey in the spring as in the fall. This has been a poor season for bees. The dry weather early in the season shortened the white clover yield, and lichen was a failure, so we have only gained the position we held a year ago in number of colonies, and no surplus honey of any amount. Bees seem to be doing fairly now on buckwheat of which we have 6 acres, which, if nothing more, will help to keep up brood rearing and enable them to get in shape for winter. As a practical bee-keeper's paper we think the *AMERICAN BEE JOURNAL* has no equal. C. A. GRAVES.

Climax, Mich., Aug. 18, 1879.

Having for the last 55 years kept bees, and never having contributed anything to the columns of your valuable *BEE JOURNAL* (which is not excelled by any of the bee publications of the day), I thought I would drop a few lines giving some of my observations in my experience with bees. Last season I had 2 large swarms issue at the same time, having stopped 4 others at the same time. They started for the woods at once, going across my cornfield. I followed pelting them with all my might for $\frac{1}{2}$ of a mile, and so disorganized them that they scattered about and finally returned to their old home. I then at once artificially swarmed them with success, and having been called to transfer a hive of bees last June, I found them with a good appearing queen, combs with plenty of brood, nine-tenths of which was drone brood, the remainder worker—all intermixed through the worker combs. My opinion is old age of queen was the cause. Would like to hear the opinion of some of my brother bee-keepers. The past winter with me was a disastrous one, having lost all my bees but 1 colony—120 colonies. I bought of James Heddon and others 9 colonies of the dark or leather colored variety of bees, which I believe are the best variety now bred in Michigan. I have increased them to 66 to date. They are still swarming, one being out while I am writing. I have mostly



divided, giving full sets of old combs, feeding all my extracted honey from the old combs at times of dearth in bee-pastures. Shall feed mostly after the honey season is over. My bees are now doing finely on the red clover of second growth; have done finely on first growth of clover, even the large or mammoth variety; while the blacks take the back seat. I have been trying to rear queens in nuclei of small combs, all in full cards of comb; but almost invariably when the young queens commenced to lay they would swarm out with a few bees, without giving me any notice of their leaving. One of them, without my knowledge, entered a hive of blacks and by some means superseded the dark lady which was brooding nicely, and now they are as fine a colony of Italians as I have. Will some one inform me how to obviate the loss of young queens from at once leaving the nuclei as soon as fertilized? All have left me but one. Success to the AMERICAN BEE JOURNAL, as I could hardly know how to get along without its monthly visits. J. B. IDE.

[You have not given young queens room enough to deposit eggs after fertilization, the comb soon being filled with eggs and honey, they could not idly wait for brood to hatch out. Had you given plenty of empty combs, you would not have had your nuclei deserted. The mixed drone and worker brood was undoubtedly owing to a superannuated queen.—ED.]

Galena, Mo., Aug. 18, 1879.
Please give us an account of the "varmint" inclosed, per BEE JOURNAL. He has a sting $\frac{1}{2}$ inch long and is called by the natives here, "cow-killer." They are said to be much larger in Texas and actually to kill cows there. I gave him a dead wasp and a few flies for grub en route, though I don't know as they will agree with the gentleman's taste. HAROLD FISK.

[The formidable ant-like insect sent by Mr. Fisk, is the *Mutilla coecina*, Linn., commonly known as cow killer. It is really a digging wasp, belonging to the lowest family *Mutillidae*, and closely related to the ant family, as seen in the form of the insect and the absence of wings in the females. While the presence of a large and terrible sting in the females and the absence of the same in the males, shows the true wasp character of this curious insect.

The cow-killer is one inch long, ant-like in form, with a bright red head, thorax and abdomen. Transverse dorsal lines of black extend across the front and middle of the abdomen. The whole under parts, the union of thorax and abdomen, the legs and the front of the head about the mouth are dark brown.

Why the name cow-killer is applied to these insects, I can not tell. That it is sug-

gestive of fact is not at all likely, though it is stated that its sting is very severe.

Mr. Benton tells me that once in Tennessee he picked up one of these insects, which there, are known as red ants, when a friend exclaimed in horror, "Let it go or it will kill you!" His nerves caused him to obey, though his reason told him that such fear was undoubtedly groundless.

The winged male is smaller than the female, and as it has no sting is not to be feared at all.

If Mr. Fisk or any other friends of the AMERICAN BEE JOURNAL, will send me two or three pairs of these wasps, I will be very grateful. They dig holes in the ground, and store their earthen cells with insects.

This insect it seems possesses more than a common interest to the apiarist. Mr. A. H. R. Bryant, of Clarksville, Texas, in the "American Entomologist," Vol. II, page 337, states that he caught one of the large females in his bee-hive eating the young bees, and anon killing the bees with its powerful sting, though utterly undisturbed by their attacks.

The insects sent by S. L. Emery, Charlerville, Ohio, are—

1. A sphinx moth (*Sesia thysbe*). These moths are seen about flowers in the hot sunshine. They poise, like humming-birds, above the flowers, and sip the nectar by use of a very long tongue.

2. The bee is the tailor-bee, whose strange habits and cells are described in my "Manual." This bee is peculiar in the dense yellow hairs beneath, which are usually covered with pollen.

3. This is a fly of the predaceous family Asilidae. It is *Laphria sericea*, and so belongs to the same genus as *L. thoracica*, mentioned on p. 300 of 4th Edition of "Manual." Is this also a bee-killer?

The plants sent by Mr. E. S. Flanagan, Belleville, Illinois, and so heartily commended as honey plants are *solidago* or golden-rod, and blue vervain or *verbena hostata*. As stated in August AMERICAN BEE JOURNAL, the white vervain is also a fine honey plant.—A. J. COOK.

Boundy City, Ind., Aug. 26, 1879.
I am very well pleased with the AMERICAN BEE JOURNAL, and every man having bees (though but one colony) should read it. My bees have done first-rate this summer, so far. I wintered 5 colonies out of 18; but I was not discouraged, I increased to 14, and have taken over 200 lbs. of honey.

DAVID K. KNOLI.



Pine Grove, Pa., Aug. 31, 1879.

With two old-style straw skeps, containing light colonies of black bees brought to my place by my father last spring, we started into the bee business. By reading the AMERICAN BEE JOURNAL, Prof. Cook's "Manual," Quinby's "Bee-Keeping," King's "Text-Book," and L. C. Root's "Bee Notes," we have so far got along admirably, but not without some mistakes. In May we purchased two additional colonies in Mitchell hives, which we transferred, and by dividing made seven colonies, and all but one have done as well as could be expected. By a late season and getting a late start, followed by a very severe drought during June and July, our bees did not gain much until the latter part of July, when they had increased in numbers to about the average of an ordinary colony. One of the colonies was too long with a barren queen, but they are fast recovering, and will, we think, have ten Langstroth frames filled yet with plenty to winter on, and have plenty of young bees to come out strong in the spring, if successful in wintering. Our honey harvest is now at its best, as buckwheat abounds in this locality, which appears to secrete a great deal of honey, and several of the best colonies are working in the prize boxes, filling them with beautiful white comb and the very best of honey. Second crop clover, golden rod and other fall flowers also afford some honey, so that the bees are taxed to build comb fast enough to hold what they gather. We are using foundation in the brood frames and quite small triangular pieces in the sections for starters; using no separators, and it appears as if each comb would be separate and straight. Our stock is a little mixed yet, having blacks, hybrids and Italians. Have purchased several "warranted pure Italian queens," one of which produces pure hybrids with one and two bands. We would prefer to, and expect, to have all Italians, but somehow the impression was obtained that the blacks would work better on buckwheat; we are in doubt whether we had best make the change when the buckwheat crop is one of our main sources of honey. Can you, or any one with experience on this subject, advise through the JOURNAL? So far as our observation has gone, there is no difference what kinds of flowers are visited, the bees appear to be all engaged side by side, even on red clover. It has been written that all beginners are tempted to experiment, and we are no exception, having started with the original Langstroth hives, we changed the form to boxes 12 inches deep, 15 inches wide and 15 inches long inside, so our frames are nearly 11x14, consequently have already two sizes. In traveling through this State and in part of Maryland we found time to visit some of the most extensive and experienced apiarists, also some less extensive, but found them generally enthusiastic and adopting the latest improvements. Of quite a number visited, some are subscribers to the AMERICAN BEE JOURNAL, some have been, and all should be. I have so far only found one who has had a large experience and been apparently successful of late, whose education is complete. He says that he knows all

the books and periodicals contain or likely to contain. Just think what an acquisition such a person would be as an editor! Among others visited, I will mention D. A. Pike, of Smithsburg, Md., who is already widely known as a successful apiarist. Mr. Pike rears and sells a number of queens and uses all the latest improvements, taking pride in showing visitors everything that is interesting about his yards, and never tires of explaining and imparting useful information. His clear extracted and beautiful comb honey show the fruits of his success. Lancaster Co., Pa., has an Association of Bee-Keepers, who are all intelligent and wide-awake in the art. Mr. J. F. Hershey, of Mt. Joy, is an expert, and right at home among his bees. He had an Italian imported queen, just received from the office of the AMERICAN BEE JOURNAL, from which he expects to rear a few queens yet this fall. Mr. Hershey rears and sells a great many queens, and believes in improving the stock by infusing imported blood among his already improved strains of bees. The yield of honey is not as large this season as some others, except perhaps where buckwheat is raised; it may make a fair average. I send you for name an insect that I caught with its victim a honey bee. The specimen was quite perfect but a meddlesome boy in opening the case and drawing out the contents, separated and lost a part.

W. H. S.

[Italian bees will gather and store honey from plants and at all times when native bees and hybrids can. The bee-killer you send is rendered useless as a specimen by being entirely destroyed as to shape and appearances.—ED.]

Birmingham, Ohio, Aug. 21, 1879.

To-day I noticed 3 dead queens before the entrance of a hive, and on opening the hive found four more live queens on the combs (2 on a comb) which seemed to care as little for each other's presence as do the workers. Now, according to the authorities on bees, the first queen that hatches out destroys all the other cells; but it seems there are exceptions to all rules. They were all nice, large, yellow queens, and just what I wanted, as I had 2 swarms that were queenless.

C. A. GRAVES.

Bowden, Ga., Aug. 17, 1879.

On June 7th I bought and had shipped to me a colony of Italian bees, and on the 15th of August a large swarm issued from it. I watched for the queen, and caught her, put her in a cage, and placed a new queen at the entrance of the old hive, and when they began to return I put her at the entrance of the new hive and the bees returned and entered the new hive. I then moved it off and gave them 3 frames of comb and honey, and they are doing finely so far. This is $2\frac{1}{2}$ months later than we usually have swarms in this section—most of our swarms are in April. I have 20 colonies of black bees, and am going to transfer all into frame hives and Italianize, for I am satisfied the Italians are far superior to the blacks. I had no swarms this summer, but made it up in honey.

H. McWILLIAMS, M. D.



Wilmington, N. C., Aug. 18, 1879.

I am at a loss to think the Albino queens have been bred from the Italians. You have not written me how it was done, and it remains a mystery to me. My Italians have the distinct three yellow bands, and are very light; drones are very good, but I have had no workers with three white stripes till I got from you what are so-called Albino queens. How you have succeeded in breeding them I do not know; this much I am certain of, that they are a great improvement on bees—the Albinoes are far superior to the original Italians. They are larger, stronger and far ahead of the Italians in gathering honey, so far as I have tested them. I have proven that a queen is not fertilized for life, and can take a bet of a \$1,000 on it. I have many patent rights, which I paid for, that are of no account. I have invented my own hive, and it is sufficient to say it proves satisfactory to me and my bees. I do not use frames in these of my hives. I use for the surplus honey 6 lb. glass boxes, 4 to each hive. I have got this season 150 of these boxes, and have sold all at \$1.00 per box. I have a good many movable frame hives, but do not like them so well as my own patent, for the simple reason that here in North Carolina, there is too much pitch-pine and gum which the bees bring into the hive, and glue the frames and contents so that it is hardly possible to open them or pull the frames out. I have seen Mr. Taylor pull with all his might to get the piece of canvas from the top so he could take the frames out and show them to me. Well, he calls me a "box-hive man," and yet he has not got a pound of honey from his bees procured from Dr. Brown. The editor of the AMERICAN BEE JOURNAL must be a poor editor, and not very experienced, for the simple reason that he publishes such slang from a man like Taylor.

H. H. BLOOM.

[The foregoing is extracted from a letter forwarded us for publication by friend D. A. Pike, of Smithsburg, Md., and is intended, we suppose, as a refutation of the pleasantry indulged in by Mr. R. C. Taylor, on page 376, August number of this JOURNAL, in his query regarding Albino bees. Much of Mr. Bloom's letter has been omitted, because of its too personal nature. Mr. Taylor undoubtedly meant no offense, and certainly mentioned no names in his query; and being a question of a general nature we took pleasure in publishing and answering to the best of our knowledge, as we would had it been propounded by Mr. Bloom, or anybody else. We yet have had no cause to change our opinion of the Albino bee; if wrong, will friend Pike, who has, we believe, been quite a breeder of them, correct us, and give nativity and origin? We do know Mr. Pike is a very careful breeder, and if any new developments were to be made, he, as soon as any, would discover the mode. We have re-

ceived queens from him whose progeny were very fine, and expect a nucleus with an Albino queen, upon which we will report when we have had time to form an opinion.—ED.]

Wittsburg, Ark., Aug. 16, 1879.

Bee-culture in this State is in its infancy. Bees have done well this year. This State is as good for bees as any, except California, as all trees and plants will grow here that will grow anywhere. We have the poplar tree in large quantities, and it is a fine honey producing tree. It blooms about the 20th of April and lasts about 25 days. Our honey harvest begins about the 1st of April and continues until the 1st of June; then we get no more honey until the last of August. I have sold all my honey at home this season at 12½c for comb and 10c for extracted. I have noticed my bees working on red-top grass while in bloom in large quantities; they were gathering from it, I suppose. They never commenced work on it until 3 o'clock p. m. Would it not be profitable for bees as well as for stock? I have been keeping bees for 2 years in the movable-frame hive, though I have worked with bees in the log-gum for 15 years. I never use any protection when working with my bees except the Bingham smoker. I have been successful with bees by giving them my attention, and carefully reading the AMERICAN BEE JOURNAL. On page 298, of the JOURNAL for 1879, one W. Bolling asked how to keep ants off of honey boards. Take strbgng soap suds and wash them off with it, and they will not bother it for 3 or 4 weeks.

W. H. NEWSOM.

Mortonsville, Ky., Sept. 8, 1879.

Enclosed find 2 top stems with flowers and a few of the summer leaves of some kind of weed that grows on the cliffs of the Kentucky river, which the bees work upon all day, and seem to be very fond of. The lower part of the stalk has a square appearance. Please give me the name of them. This has been a poor season for bees on account of drought; very few swarms and but little surplus honey. Bees will have plenty to winter on.

J. T. WILSON.

[One is a species of bidens or Spanish-needle (see Manual, page 234), the other is a species of eupatorium or boneset (see Manual, page 238, fig. 97).—A. J. COOK.]

Atlantic, Iowa, Aug. 16, 1879.

I think that no one can do without the AMERICAN BEE JOURNAL and keep bees successfully, as it is truly a great instructor; and when you get fairly down to business it is quite cheering when something new turns up, to find some of its numerous correspondents have been there too, and have unraveled the whole mystery in a very scientific manner. The introduction of queens for instance, a knowledge of which is very valuable, and quite simple when one knows how. I have tried various ways, but find the most successful plan is to get your bees well filled with honey; remove the old queen, if any, take bees and comb out, and

clean the hive; sprinkle strong peppermint water in it, then take each comb and separately sprinkle it and set back in the hive; then wet the bees thoroughly and pour down at entrance of hive, and as they are going in dip the queen in peppermint water and a little honey, and let her go in with the bees. In this way I have never lost a queen, and have had them depositing eggs the next day. There are other things I might write about, but give way to older lights.

G. B. OLNEY.

Big River Mills, Mo., Aug. 30, 1879.
The season here has been unusually dry from the beginning of spring till August 1st. Bees have stored no surplus honey, while some are in a starving condition. Those which swarmed have become weak, and I have doubled some, and expect to double up more. Flowers are yielding abundantly at present, and bees are storing rapidly; they are profuse around the oak trees, and seem to be at work on the twigs where the leaves grow out. I think they gather honey-dew off the leaves. I saw a hornet catch a bee a few days ago; it killed it as quickly as if it had been a fly. Bumble-bees have been going into the hives this season and helping themselves. I think I shall make the entrances smaller. I have 28 colonies at present, 2 of which are Italians. We know nothing more about extractors here than we have learned from the JOURNAL, as there is not one anywhere in the country. Can frames 9x14, and 10 inches square be extracted with the same extractor? How tall does melilot clover grow, what is it fit for besides bee-pasturage, and when should it and alsike clover be sown?

S. G. HAILE.

[Most of the extractors on sale will extract from combs of both sizes mentioned. Melilot clover grows from 2 to 4 feet high; has bloomed with us from June 10th to September 1; it is said to furnish good pasture, and make good fodder if cut before it becomes too "woody"; it is better sown in the fall, but it will grow from spring sowing. Alsike clover should be sown early in the spring with timothy; five to seven lbs. of seed to the acre.—ED.]

Park's Corners, Ill., Sept. 22, 1879.

As reports seem to be in order, I will send mine. I started last spring with 10 colonies—7 Italians, 3 blacks, in rather poor condition; have increased to 38 good strong colonies; had my stakes set for 50, but the white clover all dried up just about swarming time, so I had to go a little slow. We had a good yield of clover honey early, but the drought cut off most all supplies, so much so, that my bees went to work and converted their homes into butcher-shops, by killing off their drones, and stopped rearing brood, but when buckwheat blossomed, all went well again. The sign changed, and the fragrant smell of buckwheat told us that our pets were again at work for us. As I run them on the increase, I did not get a very large amount of honey, but more than my box-hive neighbors, both extracted and

boxed honey. Some here say that they did not get a pound of honey this season. I use the Langstroth hive, and shall use all Italian bees, as they are moth-proof every time for me. But how can I winter my nuclei and save all my queens in them, as I have a few beauties? Success to the AMERICAN BEE JOURNAL.

D. G. WEBSTER.

Huntsville, Ala., Sept. 10, 1879.

Enclosed find samples of plants on which I found the bees busily at work. No. 1 grows about a foot high; main stem about 4 inches from the ground, sends out side branches to the number of 15 or 20; the stems resemble common plantain; takes kindly to hard tramped ground, such as barn-yards and roadsides. No. 2 I found on the side of a low mountain in great abundance, the tallest about 2 feet high; has a mint smell. The bees were making merry music on it. No. 3 stands 3 feet high; is called "snow on the mountain;" is planted in yards and gardens for ornament. The center of the leaf is green bordered with white; has the appearance of being covered with snow; when broken a milky substance oozes out; is not equal to the first two as a honey plant. Please give names as they are all new to me.

JOHN R. LEE.

[No. 3 is one of the cultivated Euphorbias. The leaf is variegated. The Euphorbias are much admired as ornamental plants. No. 2 is a Verbena. The stem is too short to enable one to give the species. No. 1 is a mint.—A. J. COOK.]

Hopkinsville, Ky., Aug. 13, 1879.

This has been one of the worst years for honey we have had in this section for many years. I have 21 colonies, all in 2-story Langstroth hives, and so far have not taken a pound of honey. Bees will secure a supply for winter in September, from a whitetop weed, I do not know name of it. It yields abundantly, but it is very strong, hardly fit for use. In 1877 my yield from 10 colonies was 1,100 lbs.; sold at 15 to 25c. I purchased from Chas. Dadant one of his choice queens in June. At first I was not pleased with her, but since the brood has matured, I would not take double the price for her I paid. Will Italianize my colonies from her. Am raising queens now, but the trouble is to get drones at this scarce season of the year. Will some one tell me how to secure good drones in August and September? Long live the AMERICAN BEE JOURNAL.

R. M. ANDERSON.

Richmond, Ind., Aug. 13, 1879.

This has been a poor season for bees in this vicinity. There are, I think, too many bees for the amount of forage. There are not less than 300 colonies of bees within 2 miles of this city, and our white clover and basswood were both cut short by the drought. The best yield I have heard of was 35 lbs. from a single colony. I think the average yield in this vicinity will be not more than 8 lbs. to the colony. We all use the Langstroth hive. I winter in cellar; have never lost a colony. I always feed my late swarms



early in the fall, then when sufficiently strong leave them undisturbed during the cold weather, which I think is one of the great secrets to success in wintering. I have much to learn about bee-keeping to make it a success; but by studying Langstroth's and Prof. Cook's works, and the monthly visits of the AMERICAN BEE JOURNAL, I hope and expect to learn many of the mysteries of the apiary.

M. H. WOLFER.

Cincinnati, O., Aug. 22, 1879.

I copy from Vick's Illustrated Magazine for August: "Mr. Johnson, of St. George, Utah, writes to the *Rural New Yorker* that a well cultivated acre of mignonette will give food to 500 colonies of bees." Can this possibly be true, or the half of it? Please let us have what you may happen to know about what quantity of seed is required per acre, in what manner plant it, what kind of cultivation?

H. W. S.

[We think the amount of nectar yield is considerably overstated in the language quoted above, though its capability is enormous. We have stalks now in bloom (Sept. 16) nearly 3 feet high, and some of the bloom spikelets are fully 12 inches in length, of the *reseda grandiflora* variety. To cultivate successfully, it should be planted in drills, on good rich soil, and work with hoe or cultivator. As the seeds are very small, we think 3 to 5 lbs. per acre would be great abundance.—ED.]

Lincoln, Tenn., Aug. 26, 1879.

Bees in good condition. Had 6 strong swarms within the last 10 days, and by giving them foundation and feeding they are doing well, though very late.

J. F. MONTGOMERY.

Scranton, Iowa, Sept. 11, 1879.

Will give my experience with "Parsons' new white mignonette." I planted it by scattering the seed thinly on well prepared ground, in streaks 2 feet wide and rows 3 feet apart; I covered the seed by well raking the rows with a steel-tooth rake. It was a long time coming to any size; but whilst very small transplanted much of it, which I will never do again, as it is tedious work, and the plants are not certain to grow. I shall always sow the seed where I want it to grow. Mine grew to tip of spires about 3 feet high, covering the ground between rows; when first it bloomed there was no fragrance to it, and altogether I thought it a swindle; but it filled out and looked like a bed of snow. Bees worked on it from morn till dewy eve and again next day. It is as easy to grow as turnips, and as hardy as any annual I am acquainted with. The roots have the scent and taste of horseradish, and being white may answer the purpose of that root. It made fine bee pasture through a long drought of 2 months. It is of beautiful perennial form and showy.

T. B. BLAKE.

Near Carlisle, Ky., Aug. 24, 1879.

After all my reading in your BEE JOURNAL, I am at a loss to determine the best plan to winter our bees. 1. I have a large room plastered and dry—would it not be preferable to the cellar? 2. How often during the winter should they have a fly out? 3. How soon would you put them in winter quarters? We have had poor success with our bees this summer, not one colony in a hundred has swarmed, and not one in a hundred has gathered any surplus honey. The bees appear to be strong in numbers, but not in honey. They are working now on buckwheat.

B. F. MATHERS.

[1. After last winter's disasters, and the many different methods tried, it would be difficult to point out *any* method that would be infallible. If you have a good dry cellar, in which the temperature can be kept constantly at about 40° Fah., and can be perfectly darkened and kept free from jarring noises, we think you cannot get a better. If you have a plastered room that will meet *all these requirements*, it should do as well.

2. They should have two or three flights—the oftener the better, if the weather will permit.

3. Prepare them, by a thorough examination during the pleasant weather of this month, but do not set them away till quite cool weather sets in; say, in the latter part of November.—ED.]

Emerald, Wis., Sept. 14, 1879.

I send you stalk of plant in bloom for the name, and whether it may not only be valuable for honey, but also as a medicinal herb. I met an old soldier who called it rheumatism weed. He uses the root steeped in liquor for rheumatism. A party of Chippewa Indians were in the store while I was packing the plant to mail you, when a squaw picked off a bud, and after pulverizing in her hand, put it to her nose and snuffed it, then went sneezing around for some time. This plant grows in the woodlands along small streams, and on rather low ground, along old roads and in pastures where timber is not dense. I do not know whether it would grow on other kinds of soil or not, but think it would. It grows in clusters of 15 or 20 stalks from 1 root, and from 1 to 5 feet high. Bees work on it from 4 to 6 weeks. From my experience, I am satisfied as a bee-plant it is ahead of any thing I have met with. JAS. S. GOODWIN.

[This is *helenium autumnale*, false sun flower or sneeze-weed. The reason for this latter name is quite apparent from Mr. Goodwin's letter. There is no reason to suppose that this plant has other valuable properties than that of secreting honey; yet, white hellebore, a most valuable insecticide, is like this in inducing sneezing.

Very likely Hamlet might have said as truly, "There are more virtues in our plants than are dreamt of in your philosophy, Horatio." There is, no doubt, a fruitful source for experimentation in the study of the economic qualities of our common plants. And the honey plants should certainly be chosen as the first to study, and of these this family compositæ offers a host.—A. J. COOK.]

Battle Creek, Mich., Aug. 1, 1879.

I have taken the AMERICAN BEE JOURNAL since January, 1879, and am delighted with it. This spring I bought a colony of Italians, purchased me a hive, put them in it, and with the aid of the JOURNAL I have managed them so that they have the brood chamber well filled and 16 lbs. of surplus honey. They are very strong and healthy. My only trouble now is, where shall I winter them?

HOWARD BETTERLEY.

Rushford, Minn., Sept. 2, 1879.

I send specimen of plant, two stalks of which grow in my garden. It began to bloom the first week in August, and will, I think, continue to bloom for two weeks yet. My bees work on it very busily. Will you please give me the name of plant? This has been a poor season for bees since the first of July, as they have gathered but little more honey than enough to live on. Long prosper the JOURNAL. G. W. WHITE.

[The sprig and flowers sent are from the Rocky Mountain bee-plant, or *Cleome integrifolia*, described in "Cook's Manual of the Apiary," page 238, and has many times been mentioned in the AMERICAN BEE JOURNAL, and commended as an excellent honey plant.—ED.]

Carson City, Mich., Sept. 15, 1879.

Please notice in the JOURNAL that the second annual meeting of the Northern Michigan Bee-Keeper's Association will be held at Carson City, Montcalm Co., Michigan, on the 16th and 17th of December next. Notices will be sent to all members, and due notice will be given in the local papers in the vicinity.

O. R. GOODNO, Secretary.

Mohawk, N. Y., Aug. 27, 1879.

By mail you will find a miller of the common hive species, which are found around hives quite plenty. Are they injurious to bees?

CHAS. G. FERRIS.

[The insect is a cut-worm moth, of the genus *Agrotis*. There are several species of these plain gray moths, which do no harm about the bees, but are great plant destroyers, as growers of cabbage, corn, tomatoes, etc., can attest. The nearly full-grown larvae come up in May and June to cut off plants and dig out buds of fruit trees. They (the moths) seek concealment by day,

and so are found in and around houses, hives, etc. They are attracted by lights, and so are very apt to be found in houses where people sit and read or work evenings.

—A. J. COOK.]

Janesville, Wis., Sept. 18, 1879.

Having just commenced bee-culture I would like to learn all I can. I have 19 colonies, all in good condition except 2; those I got out of hollow trees in the woods, brought them home and put them in hives. They are strong in bees, but have not much honey. Now what I wish to know is, how to prepare sugar to feed them? Please answer in the next JOURNAL!

L. FATZINGER.

[Use "A" sugar, dissolving to the consistency of honey or syrup with warm water, and feed inside the hive.—ED.]

Eglington, Ont., Aug. 25, 1879.

There are mysteries connected with the bees which, after all the discoveries of the most acute observers, are inexplicable. I have a hive which appeared to be queenless. I united with it a good second swarm, and it appeared afterwards to be working well. The hive had one top box with an ample opening for the bees to store surplus honey, and, although the clover was very abundant, and others gave abundantly in the top boxes, I never saw a single bee in the box of this hive. Could any of your readers explain the cause of this? J. L.

[We think there is but little mystery about the case cited above. The bees undoubtedly found all the room they wanted for storing honey below, and did not become sufficiently numerous to work in the boxes till honey-gathering became light.—ED.]

Knowersville, N. Y., Sept. 15, 1879.

Please give me the names of the enclosed plants.

W. D. WRIGHT.

[Both are species of solidago or golden rod. See Manual, page 243, fig. 99.—A. J. COOK.]

Neosho Rapids, Kans., Sept. 13, 1879.

Herewith find plant which grows in great abundance in the timber land in this county, and blooms Aug. 15 to Sept. 15. It is covered with bees from morning till night. It attains a height of from 3 to 5 feet. My strong colonies are storing honey very rapidly in the boxes. Two years ago last April I found a swarm of bees in the limb of a tall cottonwood tree. I cut it down, and got the queen and about half a gallon of bees, and put them in a hive. About the first of June they left their hive and settled on a bush; I put them back; the next morning at 10 o'clock they came out again. I put them in another hive, and about 2 o'clock they came out of it. Being my first experience with bees I did not know what to do. The bees settled on a rose bush, when I caught the queen and clipped one of her wings, then put them in the hive I had them in first, and commenced to feed them. They went to work and filled their



hive about half full of comb that summer. The next spring when they swarmed the queen fell to the ground. I set the old hive back and put a new one in its place, then put the queen (a nice Italian) in it, and the bees soon came back and went in with her. This spring they swarmed and I hived them the same way. I have now 9 good colonies from that queen by natural swarming. I attribute all my success to "Cook's Manual of the Apiary" and the AMERICAN BEE JOURNAL.

NATHAN DAVIS.

[This is a species of Spanish-needle, or bidens. See "Manual of the Apiary," page 244.—A. J. Cook.]

Richfield, Ill., Sept. 11, 1879.

I have been in this county 43 years, and this has been the poorest season for bees that I have ever experienced. I have been a bee-keeper for many years, keep the Italian strain, and use the Langstroth frame, but different style of hive. Last fall I left 45 colonies on their summer stands, of which 4 froze to death in March; had 9 natural swarms this season; no surplus honey; some honey from white clover; Linden was a failure on account of drought, and buckwheat also. Not one-half the colonies in this county have stores enough for winter, and mortality among them will be great. I would like to have the name of the accompanying sprig of plant. It may be common in some places, but not here. It seems to be attractive for bees.

DAVID RICE, SR.

[This is a species of coreopsis, tick-seed (see page 244, Manual). As I have only the flower, I cannot tell the species.—A. J. COOK.]

Clinton, Ind., Sept. 20, 1879.

A new feature in the relation of sorghum manufacturers *vs.* bee culture has come to light in this vicinity. A farmer living 5 miles west of here has 40 or 50 colonies of bees; a neighbor living close by engaged in manufacturing sorghum molasses; the bees swarmed around in such numbers as to compel the manufacturer to desist and go away. The bees then made a raid on the slush-hole, where the skimmings were thrown, and filled themselves to repletion, until they died there in such quantities as to cover the slush to the depth of 2½ or 3 inches, and lay dead and sick all over the yard near the furnace. Has the like occurred before, and what is the chemical or poisonous effect of the syrup on the bees?

H. A. WHITE.

☞ A British bee-keeper says he has witnessed the destruction, in two weeks' time, of a thriving apiary of five colonies, solely by wasps—which being in a starving condition, and as much for warmth and protection as for food, forced an entrance into the hives. The best defense he has found, both against wasps and robber-bees from stronger colonies, is, first, to keep the colonies uniformly strong, and second, to close the entrance holes to the attacked hives so that only two bees can pass or repass at the same time, thus giving one means of defense which they will not be slow to take advantage of.

Foreign Notes.

Bee Show at Perth.

The Caledonian Apian and Entomological Society, in accordance with a precedent inaugurated some two years ago, chose the occasion of the Highland and Agricultural Society's Show for their exhibition of hives, bees, honey, etc., on July 29th and three following days. The Highland and Agricultural Society have taken the sister show under their wing in a very kindly manner, for they have at once given a free site, voted a grant of £20, and offered a handsome silver medal for the driving competition. Under such fair auspices the Show could hardly fail of success, and we have much pleasure in giving a brief account of the exhibition.

Passing along to the northeast corner of the grounds where are pitched the tents sacred to the bee, we find the center of attraction to be the Observatory hives. In this department there was a keen competition, and the first prize fell to Mr. Bryce Wilson, Newburgh, whose hive, working somewhat on the old "Huber" principle, was noticeable both for its ingenuity and beauty. The bars, 7 in number, were of the Woodbury size, arranged in a row, and standing parallel to each other. These working on a pivot opened out like the leaves of a book, while the bees found their way to the main channel down the center of the pivot. We do not know, however, if the bees would find themselves quite at home in the elaborate complication of such a dwelling. Mr. W. W. Young came second with a 6-bar Woodbury hive. In it the frames were arranged in two perpendicular rows, showing artificial comb foundation in the various stages of extension up to the complete cell. The exhibit looked remarkably neat, inclosed as it was in a bower. Mr. J. D. Hutcheson, Glasgow, made an exceedingly good third; it being a matter of no small difficulty to adjudicate the respective places merited by these excellent exhibits.

A most interesting thing was elicited by the prize offered for the most artistic design wrought by the bees. Mr. W. W. Young, Perth, did himself an honor by the exhibition of the Perth arms—two spread eagles with the word "Perth" underneath, and wrought out in honey comb; and the design received the attention and admiration it so well deserved. Mr. R. R. Godfrey showed a beautiful collection of natural objects and diagrammatic illustrations of apicultural subjects. Among the former was a curiosity in the shape of a wasp's nest found in a hive. Terrible as these creatures have always seemed, we couldn't help thinking that our old enemies would have got their deserts had the Ligurian bee been tenants of the invaded hive.

The hives shown were numerous and all of a superior kind, both as to workmanship and design. The bar-frames indeed were so fine a show as to awaken a hope that the old "ruskie" and the bar-barities too long

associated with its use will speedily vanish. Mr. Steele's and Mr. Raitt's supers were on the American 2-lb. system, while Mr. Young's were on the 1-lb. principle with the possibility of alteration in several directions. Mr. Young's collection of bee furniture was a rare sight to bee-keepers. It included 135 articles, from a needle for fixing queen cells up to a bar-frame hive. Mr. Steele's collection was inferior chiefly in point of extent. One of his exhibits was a machine for making artificial comb foundation, along with a specimen of the work produced, which was of a high order. This machine, we may state, is, like many of our leading inventions, the product of American ingenuity; but the mechanical reputation of this country was so far sustained by Mr. Thompson, of Blantyre, who, although only a working joiner, has succeeded in imitating the American design, and in producing from his machine impress sheets that took the first place. Mr. Thompson's foundation, it may be observed, was rather light in color, and Mr. Raitt's rather dark; but the workmanship of the three exhibits was of an exceptional kind.

The Patterson bar-frame feeder, improved by Mr. Young, is a capital thing. To both these gentlemen bee-keepers are much indebted, especially in a season like the present, when the bad weather has made feeding assume an abnormal importance. The straw hives showed a wonderfully good front. The first prize one had a flat wooden top, with comb foundation guides and spaces of $\frac{1}{4}$ inch cut in the top board for supering, an excellent idea, which all straw hives would do well to pick up. A clasp for holding frames and comb foundation while fixing was exhibited by Mr. Thompson.

The honey extractors received considerable notice. Mr. Steele's extractor is a reproduction of A. I. Root's, of America, being his 20-inch Woodbury, with a strong wire mesh of about $\frac{1}{8}$ inch. Mr. Young's was also a superior machine, somewhat after the same pattern, but instead of the comb being placed as it stands in the hive (as in the former one) it is placed on its end in a slanting position. Mr. Godfrey's collection of honey-producing plants was noticeable for its neatness, as was also Mr. Young's, wrought into the form of an arch, with a crown suspended from the center, and a water foundation beneath. Before passing out of the main tent we were invited to taste Mrs. Patterson's sweetmeats made with honey, which were excellent. Mr. Wilkie, of Gourock, followed suit by an invitation to taste his wine made from honey, but it was found that the Perth "drouths" had finished it. We were, however, assured by some of these gentlemen that it tasted admirably.

The manipulating tent was a scene of great interest during the show. It is of octagon shape, the operator standing in the middle, while the public feel secure under the protection of an intervening gauze screen. Driving bees from a straw skep and transferring their combs to a bar-frame hive were hourly operations, and never failed to strike with astonishment the spectators, who stood aghast at seeing a human being unprotected turning up a hive of bees

and handling them as if they were blue flies. The following gentlemen conducted the manipulations during the different days: Baillie Laughland, Kilmarnock; Messrs. Paterson, Straus; Anderson, Dairy; Hutchesson, Glasgow; Ellis, Bridge of Earn, and Wilkie, Gourock. Not a little excitement was created among the onlookers when Mrs. W. W. Young entered the ring alone and demonstrated to them that ladies were quite capable of performing the different operations connected with apiculture.

Mr. Thomas G. Newman, editor of the *AMERICAN BEE JOURNAL*, who is in this country at present collecting information relative to the state of apicultural science in Britain, was present during the first three days of the show. He was sent by the American bee-keepers to visit various parts of Europe, and will return home to lay the material he may gather before the Convention which meets at Chicago in October. Mr. Newman gave a series of lectures during the different days on the American system of bee-keeping, which were very interesting, and were well received. The Society presented to him a medal as a souvenir of his visit to this country, and for the valuable services he has rendered to the present session of the Society.

The driving competition commenced at 11 o'clock yesterday, when six competitors entered the list. After the straw skeps had been balloted for, they were turned up one after the other, and by gently tapping on the sides of the hive the bees were compelled to leave their homes with their stores of brood and honey, and to take refuge in an empty skep placed above. The queens were captured and exhibited to a large assemblage of spectators. It was ultimately found that the Society's medal fell to Mr. John Wilkie, Gourock, who drove his bees and caged the queen in 8 minutes, being 12 minutes shorter time than the same operation was accomplished at Kilburn the other week. Mr. W. Raitt, Blairgowrie, was second (no prize), having taken 13 minutes. The judges in this department were Messrs. J. Ellice, Bridge of Earn, and Steele, Fowlis.

Altogether the show was a great success, the credit of which is due to Mr. W. W. Young, whose painstaking labors during the past six weeks has been very great; he deserves great praise for the manner in which he conducted the affairs of the Show, and the managers, assisted by the able Secretary, Mr. Bennett, and the Acting Committee.

 Since the spring of 1876 Herr Benedict Brogilio, of Strausburg, has been practicing the following method with success, in introducing queens: The bees of the hive into which the queen is to be introduced are brushed from the combs into a box, then dampened with fresh water, and poured down before their hive; the queen being permitted to crawl into the hive with the buzzing bees. Before beginning this operation the queen that is with the colony at the time is removed, or any queen cells present are destroyed, when the bees have been shaken from their combs.



Caledonian Apiarian Society.

A general meeting of the above Society was held in the Tent, Showyard, Perth, on Thursday, for the purpose of nominating officers for the coming year. The following were unanimously chosen : Hon. President, the Right Hon. Earl of Rosebery ; President, Charles Howatson, Esq., of Dornal ; Vice Presidents, James Lumsden, Esq., of Arden ; James Laughland, of Kilmarnock ; Rev. John Irving, of Inverness ; Hon. Secretary and Treasurer, Robt. J. Bennett, 50 Gordon Street, Glasgow. The following resolutions were then unanimously passed :

"That it is incumbent upon all bee-keepers to lend their aid and influence in forming local Societies to affiliate with the Caledonian Apiarian Society to encourage the science of apiculture throughout Scotland.

"That silver and bronze medals be awarded to the Perthshire Bee-Keepers' Society for competition at their local show for the year.

"That as the season this year has been so unpropitious as to prevent honey gathering, the September honey show in connection with the Glasgow Horticultural Society shall be abandoned this year.

"That our silver medal be presented to Mr. Thomas G. Newman, of Chicago, President of the North American Bee-Keepers' Association, as a souvenir of his visit, and for the valuable services he has rendered to the present session of the Caledonian Apiarian Society.

"That as in a poor season like the present, much spurious honey may be put into the market, all members should have their honey assorted and labeled by the Society, showing both its quality and genuineness."

A competition for the medal presented by the Highland and Agricultural Society for the driver of bees was held yesterday in the small tent adjacent to the Aparian Society's handsome marquee, when six gentlemen entered. The judges were Mr. John Ellis, Bridge of Earn, and Mr. Steele, Fowlis Easter. The colonies were balloted for and the skeps inverted, and by gentle tapping the bees were induced to leave their stores of honey and brood in their old hive and take refuge in an empty skep. After a keen competition the winner of the medal was found to be Mr. John Wilkie, Gourock, whose previous achievements in this line are well known. The object of the competition was to demonstrate to bee-keepers the science of bee swarming.

From the British Bee Journal.

The Late Abbe Collin.

G. F. PEARSON.

I feel that you and many other readers of your *Journal* will lament the death of the old French *apiculteur* the Abbe Collin, in his 79th year, from an accident while engaged in hiving a swarm of bees on the 14th of last month. Monsieur Collin had devoted, so to speak, his whole life to the study of apiculture ; and though too old

readily to accept the new and improved methods now so generally adopted, had in his time added many steps to the ladder by which these improved methods have been reached. His work on the "Bee and Bee-Keeping" has reached the fifth edition, which alone will show the share he has had in promoting the science of apiculture, and in superseding the use of the brimstone pit in France.

Monsieur Collin was born in the first year of the present century, and in or about 1824 was appointed cure of Tomblaine, a village distant about two miles from Nancy. There he remained 37 years, and he carried on his studies in bee-keeping and bee habits. He was a man of much *esprit*, witty and pleasant in his conversation, and a fine classical scholar—the love for the Latin poets breaking out from time to time as he talked with you, even to the last. As a churchman he was a fine specimen of the old Gallican clergy, utterly free from any sort of bigotry or intolerance.

Monsieur Collin was still fairly strong, considering his great age. The last 18 years of his life he passed as honorary canon of the Church of Bon Secours at Nancy, to which residence is attached, and where he kept usually from 12 to 20 colonies in his garden, but entirely for his own experiments. Indeed, he never kept bees in any sort of way for profit, and rather looked on the ordinary taking of honey from a hive as a sort of theft, which in a certain sense was an unfair proceeding to his little friends, who had labored so hard to store it, and to whom his whole life had been one long-continued devotion.

The Abbe Collin died in harness much as any soldier ever did on the field of battle. One of his colonies had swarmed on the morning of the 14th of June, and having no one to call to his aid at the moment, he got a ladder and with the help of his old servant placed it against the tree. He had mounted about 4 feet, when feeling the ladder shake, he unfortunately leaped to the ground, shattering his right ankle-bone and the bone of the leg in several places. He had every possible medical attention ; but even to a young and strong man the accident would have been of the most grave nature, and at his advanced age amputation was impossible. A naturally good constitution enabled him to struggle against it for some time, but at his age the shock was too great, and he died peacefully on the 25th of June, 11 days after the accident.

Translated from *L'Apiculteur Alsacien-Lorrain*,
by Frank Benton.

Comb Foundation—No. 6.

Liepore, Dec., 1878.

MY DEAR FRIEND.—Turn bottom upward one of those fine large basket-like hives in which you formerly hived your bees ; cut out a piece of comb foundation the size of the hive across the middle less about one centimeters (three-eighths of an inch), and $1\frac{1}{2}$ centimeter shorter than its height ; round off the lower edge in such a manner that it will fit as nearly as possible to the bottom of the hive ; then,

with a coarse needle threaded with fine twine pierce the straw and fasten the foundation, which is held upright, as I did in the frames. When the first sheet is fastened, place parallel to it another, necessarily smaller, at a distance of thirty-six millimeters (one and three-eighths inches), and so proceed on each side of the foundation first inserted, until you have filled the hive. Then from a can having a long spout pour melted wax into the angles that the sheets of foundation made with the top of the hive. The sides are left free, as in fitting sheets into frames.

Nothing is prettier than a bee-hive prepared in this manner, but whatever some enthusiasts may say regarding it, beware of thinking it the most practical method. I have tried the experiment to my cost.

No matter what plan you adopt in the stocking this new habitation, less than a day suffices to reduce your ingenious fabric to a shapeless mass of ruins on the bottom-board or entangled with the strings. Softened by the heat due to the agitation of the bees every comb will have fallen down under the weight of the cluster. It will be good fortune indeed if, in this general destruction, the queen does not meet the fate of Pliny before Pompeii!

I know only one way to avoid this difficulty; and two conditions are indispensable: 1. You must have a straw hive filled with an energetic swarm having a young queen. 2. The year must be a very good one. The first condition is under your control; the second, unfortunately, is a child of hazard! However, if the month of April has been favorable and rape-blossoms have yielded well, try the experiment.

Now, toward the close of this month raise up your strong colony, sliding under it your hive furnished with comb-foundation, the hole in top of the lower hive being open; stop up the crevices between the two boxes with clay and close the entrance of the upper one. In order to leave the hive the bees are obliged to go through the new portion; after a little they will stop there; work with the wax will commence; the queen will descend as soon as some cells are finished, and, once below will rarely go up again. By the month of September the lower hive will have become the brood-nest, while that above will be full of honey. This new sort of a cap is to be removed and the lower hive closed above.

You will obtain in this manner a rapid renewal of the combs, without defect, and also quite a quantity of surplus honey in the cap. But I repeat, the season must be very favorable or else you will be obliged to resort to feeding for stores, a process to which, because of its expense, you would not be the only one to object.

I will say nothing of the partial renewal of the combs in an old hive by the introduction of foundation-sheets. The manipulation in this case would nearly equal the labors of Hercules, and the bee-keeper the best protected against stings, would say his prayers three times before venturing into this hornet's nest.

They employ only to a very limited extent comb-foundation in immovable-comb hives that are already stocked. Shall we use it

in the surplus boxes? For my part, I say no, because I sell the honey stored in these boxes as first-class honey and in the combs, and only virgin wax is easy to cut. To those manufacturers who, as I have read, recommend their foundation even for this purpose, I will reply by the use of some words which occurred to me two years ago: "The middle-wall of your combs is of leather or of paste-board; the products of our peasants with their rude and primitive hives, are as fine and more tender. You would do well, I think, to go back."

If you only sell liquid honey it is evident that you could make good use of comb-foundation in the surplus honey-boxes. However, in order to accord with the natural inclination of the bees, give them, in these places, only drone-comb foundation.

"But place no reliance upon foundation sheets which, in case the workers refrain from destroying them, would only give large, irregular cells!" This absurdity was certainly born in the brain of some ideologist who never examined the interior of a bee-hive except—in a dream.

In the building of cells bees know only three sizes: that of worker-cells, that of drone-cells, and that of queen-cells. All their application of geometric principles is limited to this. Why? Well the explanation of this is easy. Nature mainly impels, I might say solely impels, whatever exists to perpetuate itself. But what do our insects need for the preservation and the propagation of their kind? The three fundamental brood-cells, and nothing more. They only have to make cells, the accumulation of stores being only a secondary matter in the life of these little creatures, and this accumulation can be made largely in the ordinary cells as fast as the advancing season renders them available by the discontinuance of laying.

The conclusion to be drawn from this letter and those which I have previously written is: Use comb-foundation, but not always, nor everywhere. Follow my advice concerning it and try nothing further; you will save yourself some vexatious experiences, and, what is not less important, you will spare your purse. DR. REISSE.

Bee-Keeping in Algeria.

I have just got the news that at the *Couours Régional de Beauvais*—in other words, Flower and Bee Show—I have been awarded a *Medaille de Vermeil* (silver-gilt) for the completeness of my exhibit, and especially the introduction of the manufacture of foundation into France, as also my supers, when the principal judge was Mons. Hamet. You may imagine I consider this a triumph. I have sold all my bees and leave here very soon—heat unbearable, killing me—so I will locate near Paris (D.V.), and run a few colonies in the Gatinais, if possible. This was an awful season for bees here—3 swarms on 60 colonies, and not a drop of honey. Same all around—Arabs and French Algerian bees and Italians all alike.—Arthur Todd, Blidale, Algeria, July 8, 1879, in *British Bee Journal*.



Lausanne, Switzerland, Convention.

The Societe Romand d'Apiculture convened at Lausanne, (Canton of Vaud), on August 21st. There were about 80 present, four being ladies. The date of the meeting had been advanced in order to suit the convenience of the Hon. Thos. G. Newman of Chicago, President of the North American Bee-Keepers' Association, who had kindly promised to attend. He occupied a position at the right of Mons. C. de Ribeaucourt, the president.

The minutes of the last meeting were approved.

The president delivered an address which was well received. Owing to the success of Mons. Bertrand's Bulletin the number of members has increased from 96 to 161 and will soon attain a much higher figure by the union of the Societe Vaudoise whose members will be united to our society.

The President wished a hearty welcome to Mr. Newman and explained that this gentleman was appointed by the American National Association to attend the different bee conventions and the honey shows of Europe, to officially represent the bee-keepers of America and aid in establishing a bond of union.

The Treasurer presented his annual report which was, on motion, accepted.

After the enrollment of new members, the President and two members of the committee were re-elected.

Then the assembly wishing to give a mark of sympathy and gratitude to men who have labored assiduously for the progress of bee-keeping, elected the following persons as honorary members: Hon. Thos. G. Newman, of Chicago, Ill.; Mr. Chas. Dadant, of Hamilton, Ill.; Mons. Ph. Ritter, of Bern, President of the German-Suisse Association, and the Rev. J. Jeker, of Lubingen, Redactor of the Calendar for Mons. Bertrand's Bulletin.

The annual dues for each member for the year 1879 were then fixed, after discussion, at 3½ francs. A discussion then ensued on the formation of sections (branches) of the Society.

Mr. Newman, after having delivered a short address in reply to that of the President, gave most interesting and detailed explanations of a model of the Langstroth Hive, which he brought with him, as well as on different kinds of wax foundations, far superior to our European foundations, including the new wire foundation, which would be exceedingly useful to those bee-keepers who are in the habit of carrying their bees to the mountains, for a second crop.

There was a show of implements for the apiary, such as Swiss, Layens, Quinby-Dadant and Burky hives, honey extractors, and a great many samples of Swiss and foreign honey, including Chili honey, which was found very bad, California and New York honey, in tin cans, two years old, of very good quality, but perhaps not quite equal to the fresh Suisse mountain honey.

At dinner a humorous discussion took place between Mr. Newman and several members on the topic of "Shall we sell

Honey at low or high prices," (M. Bertrand, interpreter.) Messrs. Newman, Rochert, Bertrand and others spoke in favor of cheap prices, while M. Nonguier and others declared they would be glad to give their honey at low figures if they could only learn from Mr. Newman how to get *American quantities* of honey; to pay the expense and trouble. Mr. Newman replied he had previously explained American bee management and that the Swiss flora and the Swiss bee-keepers must do the rest.

M. Bertrand told the assembly that the American honey would come by tons to the Swiss market if they kept the prices of their honey so high—more than double the price of American honey.

By general request Mr. Newman gave an interesting report of the different crops of honey obtained in the Northern States, and the time of blooming of the greatest honey-producing flora of America.

After dinner, before going to visit Mons. Dumoulin's apiary in the town of Lausanne, M. Nonguier thanked Mr. Newman, in the name of the assembly, for his kind visit, and three enthusiastic cheers were given in the Swiss way, by the beating of hands, "three times three" in honor of the bee-keepers of America. We shall all long remember that most interesting day.

ED. BERTRAND,
Secretary of the Society Romande.
Nyon, Suisse, August 22, 1879.

The Austro-German Convention.

More than 700 bee-keepers assembled at the Hall at Prague, on Tuesday, Sept. 9, 1879, at the opening of the 24th annual Convocation of the Austro-German Association. From all the provinces of Germany and Austria, from France, Italy, Russia and America came the representatives of rational apiculture, to compare notes as to what had been attained during the past 10 years, and to discuss the most important points in this very interesting branch of husbandry.

Herr Ritter Von Comers, the President opened the session by a nice speech, welcoming the visitors to the Convention, and the Mayor of Prague gave a hearty welcome to the Association.

Before proceeding with the discussions, the Russian Councillor of State, Herr Prof. Dr. Butlerow, who was entrusted with the mission of presenting in person to Dr. Dzierzon, the Order of Saint Anna from the Emperor of Russia for his efforts for the elevation of apiculture. Dr. Butlerow said it gave him great pleasure to present this mark of high esteem to Dr. Dzierzon, and then placed the badge upon the Doctor's coat. Dr. Dzierzon was much affected by the transaction and said that he regretted that the programme was interrupted by an act of such a personal nature, but still he was glad to see that so high a personage had so acknowledged his modest efforts on behalf of rational apiculture.

Herr Werner then stated that the Emperor of Germany had recently conferred upon Mr. Hilbert, of Maciejewo, the Order of the Crown, for his remedy for foul brood.

After reading the minutes of the last

meeting the discussions commenced by the following ;

How to increase the agreeableness of the management of bees.—Dr. Dzierzon introduced the subject by stating that the first point was the meekness of the bee itself. He preferred the Italian, Caucasian, and Krainer bees, who were not so much disposed to sting as the native bees. The hives should be in such a condition as to make them feel at home and to prevent their being irritated. He approved of many of the new inventions for the management of the bees, as means to this end.

Herr Hilbert said that the family arrangements of the hive was such as to induce happiness and contentment among its inmates.

Prof. Sartori, of Milan, Italy, said that he had lately made journeys through Russia, France and Germany, and everywhere found a desire for rational bee-culture. He had pleasure in presenting some Russian queen bees to the society.

Herr John Schmidt, of Moravia, said that he preferred bees that would sting, that proved that they were healthy. He preferred the Cyprian bees, but each race is good, if well treated.

The President remarked that the widow of the late Baron of Berlepsch, and her daughter were present, and introduced them to the assembly with appropriate remarks.

The American Representative was formally presented to the Congress, the President remarking that he regarded it as a great honor for the Association to receive a Representative from America, a country that is known to be progressive as well as very practical in the science of apiculture. He had great pleasure, therefore, in welcoming to a seat in that body Mr. T. G. Newman, who was not only the Representative of the "North American Bee-Keepers' Association," but also the President of that honorable and much respected body. This was followed by much cheering, and then we were called upon for a speech. We remarked that America desired to exhibit the good feeling which she had towards all the kindred societies of the World, and had sent her Representative to personally express that feeling, not only to the societies of Great Britain, but also to those on the European Continent—but more especially to the Austro-German Congress, whose members comprised so many of the famous names of excellent apiarists, that are revered the world over. We came to see and talk with them—to listen and to learn, as well as to tell them how Americans were progressing in the science of apiculture. We wished them all a prosperous and interesting session. Our remarks were interpreted and repeated by the honorable Baroness of Berlepsch, and were received with many cheers.

Upon the question as to whether it would do to cross the Italian bee with *apis dorsata*, Dr. Dzierzon stated that he did not believe it would be advantageous.

Herr Stahala, Councillor of the Consistory in Moravia spoke concerning the safest method of introducing queens, and advised the transferring of the bees as well as the queen into a new hive. Finding themselves

in new quarters they will the more readily accept the new queen without trouble.

Herr Lehzen, of Hanover, Prof. Sartori and Paster Puchar thought it quite unnecessary to so disturb the colony.

Herr Vogel advocated the introduction of the Caucasian bee. They are more easily controlled, and are the most docile of all the races of bees; the queen being exceedingly prolific. One thing he was able to state, and that was the honey gathering qualities of the bees.

Prof. Dr. Butlerow, of Russia, also endorsed the statement concerning the qualities of the Caucasian bees.

Herr Frei, of Neuremburg, gave his method of queen rearing.

Herr Reinert, of Starkov, wished to know why in parts of the country where foul brood occurs that it suddenly appears, and how can it be prevented?

Herr Hilbert gave his experience with it, and explained his treatment of the disease and methods for preventing it.

After the Banquet and the distribution of the prizes, the Convocation adjourned to meet at Cologne next year.

Hereafter we hope to be able to find room for a full report of the discussions, which at present is impossible.

DZIERZON AND BERLEPSCH.—Pastor Johann Dzierzon, of Carlsmarkt, Prussia, is the most celebrated of the German bee-masters. He is the author of the famous "Dzierzon Theory," a statement of the manner in which reproduction takes place among bees. It is upon this theory, which has repeatedly been proved to be correct, that modern bee-culture rests. Whenever Dzierzon appears in the German bee convention—those enthusiastic assemblies composed of hundreds of German and Austrian bee-culturists, ardent admirers of the wondrous little bee—he is greeted with "Hail to the great master!" The late Baron von Berlepsch frequently called the "Bee-Baron," who also occupied a place among the great apiculturists of Germany, was at first skeptical regarding the Dzierzon theory, but afterwards became its warmest supporter and ablest expounder. One of the wise sayings of von Berlepsch—many of which have become proverbial among German bee-culturists is: *Vor allem lernt Theorie, sonst bleibt ihr praktische Stümper euer Leben lang.*" In our good mother English—and it certainly deserves a place there—this would read: Above all things learn the theory, else you will remain practical blunderers your life long."—*Mich. Farmer.*

 Herr Rudolph Mayerhöffer, Secretary of one of the prominent aparian societies in Bohemia, and editor of the Austrian bee journal (*Oesterreichische Bienen-Zeitung*), writing from Prague under date of July 6th, says: "I request you to announce in the AMERICAN BEE JOURNAL the names of those Yankees who have been made corresponding members of our Society. They are: Messrs. A. I. Root, Medina, O.; Frank Benton, Michigan State Agricultural College, Lansing, Mich.; Charles Dadant, Hamilton, Ill."



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Local Convention Directory.

1879.	<i>Time and Place of Meeting.</i>
Oct. 2.—Union, at Shelbyville, Ky.	
2, 3.—Southern Kentucky, at Edmonton, Ky.	
7.—Central Kentucky, at Lexington, Ky.	
7.—Albany County, N. Y., at Albany, N. Y.	
7.—Central Kentucky, at Louisville, Ky.	
15.—Central Michigan, at Lansing, Mich.	
21.—National Convention, at Chicago, Ill.	
30, 31.—W. Ill. and E. Iowa, at Burlington, Iowa.	
Nov. 10.—Lancaster Co., Pa., at Lancaster.	
Dec. 9.—Northwestern Union, at St. Paul, Minn.	
16, 17.—Northern Michigan, at Carson City, Mich.	
1880.	
Jan. 13.—N. W. Ill. & S. W. Wis., annual, at Davis, Ill.	
Feb. 11.—Northeastern, at Utica, N. Y.	

In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

The Western Illinois and Eastern Iowa Bee-Keepers' Society will meet at Burlington, Iowa, on Thursday and Friday, the 30th and 31st of the present month. This is one of the largest and most promising Societies in the country, and their meetings are always characterized with an unusual degree of interest. They extend a cordial invitation to any and all interested in bee-keeping to attend their meeting, and the committee of reception propose to receive and exhibit free all articles sent by bee-keepers or manufacturers, if addressed in care of Mr. Geo. Bischoff, Burlington, Iowa, and freight prepaid. Reduced rates will be given at the hotels. The usual list of prizes, will be given to members present, and will be more varied and useful than ever. They earnestly request members to bring their badges. Their present active membership foots up the handsome total of 130. We expect to meet many of the members of this Society at the National Convention to be held in this city on the 21st of this month.

Dunham Foundation Machine.

Mrs. Frances Dunham has forwarded to the AMERICAN BEE JOURNAL Museum a 12-inch foundation machine of her make, and intended for exhibition at the National Convention. This machine is gotten up in a very neat and substantial manner, and were there nothing superior claimed for the foundation manufactured by it, the machine would sell readily when placed in competition with others, because of superiority in make. A patent has been applied for on the machine, though we do not know the specifications filed or patentable points claimed.

Apiarian Supplies for Europe.

That many of the American methods of securing surplus honey and preparing it for market have met with favor in the old country, is evidenced by the fact that on the 9th ult. an order was filled from our supply department for Messrs. Geo. Neighbour & Son, London, England, consisting of several tons of apiarian supplies, embracing hives, extractors, prize boxes, sections, separators, cases, smokers, uncapping knives, etc. There is also a very gratifying demand for bee-literature—the shipment embracing several hundred copies of "Cook's Manual," Newman's "Bee-Culture," "Honey as Food and Medicine," and other publications. Messrs. Neighbour & Son preface the order with the significant remark, "This is only an initial order."

The annual Convention of the Kentucky Bee-Keepers' Association will be held in Lexington, Ky., on Tuesday, Oct. 7th, at 10 a.m. Arrangements are perfected for a large and enthusiastic gathering. Chas. F. Muth, of Cincinnati, O., and many other prominent apiarists are expected to be in attendance. The distinguished President of this Society said at their last meeting: "Our Conventions become more and more interesting; each meeting improves on the last." With true Kentucky hospitality, they "cordially invite all bee-keepers and those who have any desire to hear bee-keeping discussed, to attend."

The following letter speaks for itself:

Springfield, O., Aug. 7, 1879.
* * * * I am almost ashamed to be sending one dollar semi-occasionally, when I see what Doolittle has done; but, good for him! I wish he could send you ten thousand names and dollars. I am going to make a trip across the State with my horse and wagon, and if you will send me a few extra JOURNALS, etc., by the last of next week, I will do what I can for you.

A. B. MASON.

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I shall continue to sell, at reasonable rates, a large variety of Bee-Keepers' Supplies, such as

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A full line of Excursion Tickets will be sold at principal stations for the noted summer resorts of MINNESOTA, from June 1st to October 5th, at a LARGE REDUCTION from regular rates. Tickets good for 60 days from date of sale, but in no case longer than October 31st, following date of sale. The Minnetonka Lake Park Association have bought and improved 223 acres of land, in which are located fine hotels, which will accommodate 3000 people. Besides the sources of amusement incidental to the lake, the Park Association will hold a Musical Convention July 28th to August 1st; Grand Temperance Congress of Iowa, Minnesota and Wisconsin, August 2d to 5th; Sabbath School Assembly, August 5th to 20th.

Don't fail to go and enjoy the attractions offered by Minnesota. B. F. MILLS, Ass't G. T. Agent.
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IMPORTED QUEENS!

We are receiving Queens from the best districts in Italy, which we can sell at \$5.00 each, and guarantee safe arrival.

They are to be light, large and active. Any that do not come up to this standard we will dispose of at \$4.00 each. If a number are ordered, a slight discount can be given.

No circulars issued, or Cyprian Bees for sale at present.

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If you want to buy an Apiary, or

FULL COLONIES

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DEALERS IN ENGRAVING TOOLS & ENGRAVERS' OUTFITS
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Electrotype Cuts of any of the Extractors or Bee Hives, for illustrating circulars, pamphlets, and for advertising, by mail, post-paid, each \$1.00 Queen cuts (three different styles) each .75c. and each \$1.00 Italian or black workers, or drones, each .75

We also furnish electrotypes of any of our cuts used in the BEE JOURNAL, or will have engravings made of anything desired.

ITALIAN QUEENS, 1879.

Price, April, May and June.....each, \$3.00
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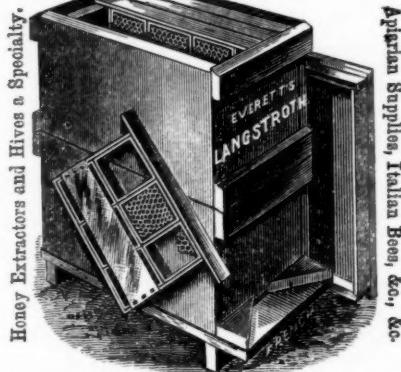
STANDARD OF PURITY.

All Queens guaranteed to be of good size, vigorous and producing worker, large and uniformly marked with three distinct yellow bars of fine golden color.

We shall have a shipment of fine Tested Queens, from Italy, in April, selected for our Apiary.

No Circulars. [2-tf] A. F. MOON, Rome, Ga.

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Apiania Supplies Italian Bees, &c., &c.

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LEWIS' SECTIONS, All in One Piece.

Owing to the many sizes of sections in use we cannot manufacture largely in advance, and in the honey season we cannot supply them daily. We will sell the celebrated LEWIS SECTION, of White Basswood, nicely finished and sandpapered, until Dec. 1st, at the low price of \$6.50 per 1,000, cash accompanying the order. Any size up to 6x6, or its equivalent.

WE CLAIM THIS TO BE THE FINEST SECTION IN THE WORLD, AND A SMALL BOY CAN PUT TOGETHER 6,000 PER DAY.

Sent 5¢. for model section.

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Italian Queen Bees FOR 1879.

I shall breed Italian Queens for the coming season, from imported mothers of undoubted purity. Safe arrival and purity guaranteed in every shipment. Prices very low. Circular sent free. Address,

D. P. MYERS,
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12 inches wide.....	\$40 00
9 inches wide.....	30 00
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Every machine warranted. On receipt of 10 cents, I will send a sample of the foundation made by the machine. Machines for drone or worker comb at the same price.

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JOYFUL News for Boys and Girls! Young and Old!! A NEW INVENTION just patented for them, for Home use!

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OLDEST AND BEST!

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This Smoker is so perfect that it has never been improved. The more exact the copy the better the Smoker and the plainer the infringement. Beware of all new direct-draft Smokers — Bingham owns all there is in value in them. Every seller and user is liable. Our Smoker has been in use two years longer than any bellows Smoker now made. If you want the best Smoker and no further expense, buy only the Bingham. If you want to encourage invention and not theft, buy only the Bingham.

Standard size, 2-inch..... \$1 50
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Sent free, per mail, on receipt of price. A discount of 12 per cent. made from retail rates on all smokers sent by express with or without one or more Bingham & Hetherington patent Honey Knives.

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Bingham & Hetherington HONEY KNIVES!



Are used plain, if the combs are held upright, and with the cap-catcher, if laid on a table. They are not like any other honey knife ever made. They are superior in finish and temper, and do much more and better work. No one can afford to be without one. Plain, \$1.00; with movable cap-catcher, \$1.25. Send for Circular for dozen rates for Knives and Bingham Smokers to BINGHAM & HETHERINGTON.

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BINGHAM & HETHERINGTON have made arrangements with the American Express Company at Otsego, to carry honey knives over their routes and either one of the other Express routes named below at 18 cents per knife, in single packages. This arrangement, it will be seen, will carry knives to all places where one of the Express Companies mentioned is located: American, Adams, United States, National, Union, Central, New Jersey, Delaware, Lackawanna and Western. Address,

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There are now over 1,000 of these Hives in use in different parts of the United States, and wherever tried they are pronounced the best Hives before the public for all general and special purposes. We are now prepared to promptly fill all orders for the North Star, or Improved Langstroth, or our patent Manipulating Sheds. Samples of surplus hives taken from the North Star, as also our hives in use, may be seen at the American Bee Journal office. Send for illustrated circular—correspondence solicited.

Address SPERRY & CHANDLER,
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SHUCK'S UNIVERSAL BEE HIVE.

Claims the Attention
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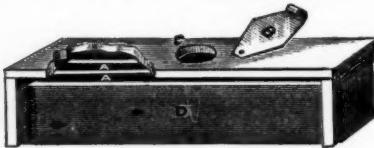
THE HIVE

Is devised by a practical bee-keeper for PROFITABLE use; double walls, with either dead air space or chaff packing; inside walls are porous, allowing all moisture to escape from the brood chamber, keeping it perfectly dry, sweet and wholesome, even with unsealed stores; both sides are removable; frames hung upon metal supports on the top of the end walls (not in rabbits) and are easily handled; brood chamber large or small, as desired, and may be as complete with one frame as with a dozen; space for 96 pounds surplus honey within six inches of the brood nest. No colony need be lost during the winter months in this hive. No melting combs in this hive during the hot weather. Positively

THE BEST HIVE BEFORE THE PUBLIC.

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Removes all the obstacles in the way of feeding, by its simplicity, cheapness, and its adaptability to the purposes required. It is to be placed at the entrance outside the hive, and supplied with sugar syrup, or syrup and flour any time in the day, without annoyance from bees, either to the bee-keeper or the colony being fed; no bees can reach the food except from the inside of the hive. Every bee-keeper appreciates the advantage of feeding to supply short stores for the colony, or to stimulate and encourage breeding, previous to an expected flow of honey.

Prof. A. J. Cook says: "I think very highly of your feeder, and only find fault with the price."

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